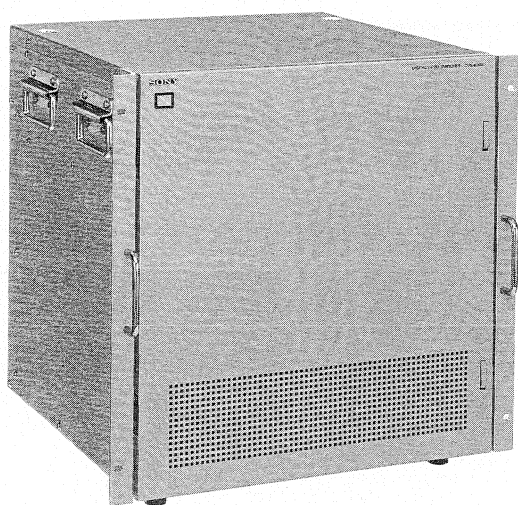


SONY

DIGITAL VIDEO SWITCHER

DVS-8000C



OPERATION AND MAINTENANCE MANUAL

1st Edition

Serial No.10001 and Higher

For the customers in the USA

WARNING

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a computing device pursuant to Subpart J of Part 15 of FCC rules.

WARNING: Using this unit at a voltage other than 120V may require the use of a different line cord or attachment plug, or both. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

For the customers in the Canada

This apparatus complies with the Class A limits for radio noise emissions set out in radio interference regulations.

Pour les utilisateurs au Canada

Cet appareil est conforme aux normes Classe A, pour bruits radioélectriques. Tel que spécifié dans le règlement sur le brouillage radioélectrique.

Bescheinigung des Herstellers

Hiermit wird bescheinigt, daß die Digital-Video-Schaltsteinheit DVS-8000C in Übereinstimmung mit den Bestimmungen der EG-Richtlinie 82/499/EWG funktentstört ist. Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt. Sony Corporation

Hinweis

Gemäß dem Amtsblatt des Bundesministers für das Post- und Fernmeldewesen Nr. 163/1984 wird der Betreiber darauf aufmerksam gemacht, daß die von ihm mit diesem Gerät zusammengestellte Anlage auch den technischen Bestimmungen dieses Amtsblattes genügen muß.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

Check the metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 3.5 mA. Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 5.25 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 20 V AC range are suitable. (See Fig. A)

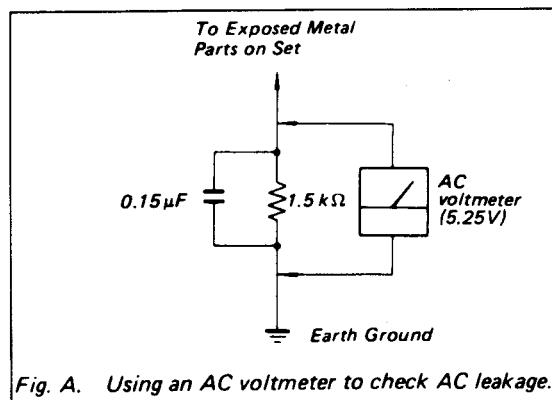


Fig. A. Using an AC voltmeter to check AC leakage.

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(This Section will be Available at a Later Date.)

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




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





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DVS-8000Cデジタルビデオスイッチャーシステムのマニュアルについて

DVS-8000Cスイッチャーシステムのプロセッサ部であるデジタルビデオスイッチャーDVS-8000Cと、これを制御するためのスイッチャーコントロールパネルBKDS-8010には、それぞれ下記のマニュアルが付属しています。

DVS-8000Cオペレーション アンド メンテナンスマニュアル

(このマニュアルです。スイッチャーに付属しています。)

第1章「取り扱い操作」では、DVS-8000Cシステムの概要、スイッチャーの各部の働き、接続例などを記載しています。ビデオスイッチャーシステム全体を管理される方は、この章を最初にお読み下さい。

第2章以降では、システムの設置および保守点検に必要な情報を記載しています。

スイッチャーのメンテナンスが必要になったときや、何らかの異常が発生したときにお読みください。

DVS-8000/8000Cユーザーガイド

(コントロールパネルに付属しています。)

コントロールパネルの各部の働きと、スイッチャーの操作方法を記載しています。スイッチャーを操作するときに参照してください。

なお、このガイドブックでは、DVS-8000CシステムにデジタルマルチエフェクトDME-5000を接続した場合の操作方法についても説明しています。

BKDS-8010メンテナンスマニュアル

(コントロールパネルに付属しています。)

コントロールパネルのハードウェアに関する情報を記載しています。

コントロールパネルの設置時や、保守点検が必要になったときにお読みください。

第1章 取り扱い操作

1-1. 概要

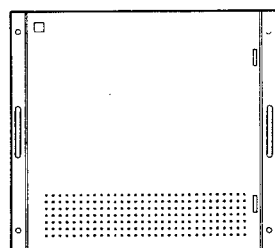
デジタルビデオスイッチャーDVS-8000Cは、放送局やポストプロダクションにおいてデジタルビデオシステムを構築するための、D1フォーマット用高性能スイッチャーです。スイッチャーの操作は、主として別売りのコントロールパネル (BKDS-8010) から行います。

なお、この第1章では各機器を次のように呼びます。

機器 (正式名称)	本マニュアルでの呼びかた
デジタルビデオスイッチャーDVS-8000C	スイッチャー
スイッチャーコントロールパネルBKDS-8010	コントロールパネル

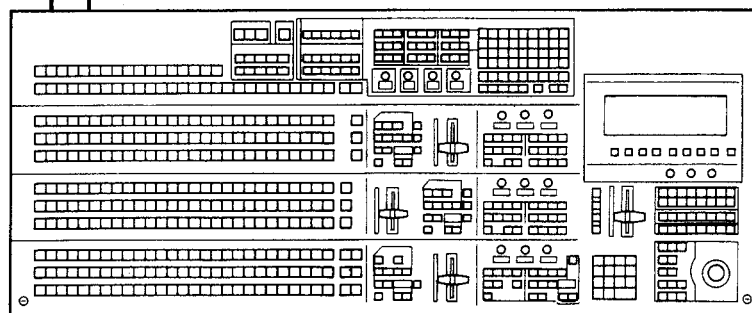
スイッチャー

(正式名称：デジタルビデオスイッチャーDVS-8000C)



コントロールパネル

(正式名称：スイッチャーコントロールパネルBKDS-8010)



1-1-1. 主な特長

完全デジタル処理により、高画質、高安定性を維持

D1フォーマットのビデオテープレコーダーなどからシリアル方式で入力されたデジタル信号は、すべてデジタル回路によって内部処理され、シリアルデジタル信号のまま出力されます。スイッチャーの入出力は10ビット、内部処理は最大14ビットにまで語長を拡張しているため特性劣化が少なく、高画質であるというデジタルの利点を損なわず、高度の映像効果を生み出すことができます。

また、入力部にバッファメモリーを備えているため、リファレンス信号に対して約±0.5Hの範囲内で自動的に位相調整できるだけでなく、入力信号にある程度のジッターがあっても安定した動作が可能です。

入出力にシリアルデジタルフォーマットを採用

デジタル信号の入出力はすべてシリアルで行っており、BNCケーブル1本でデジタルビデオ信号の伝送ができます。このため、従来のパラレル伝送に比べて接続が容易になり、システム全体が大幅に簡略化されるとともに、長距離伝送が可能になっています。

豊富なプライマリー入力数

デジタルプライマリー入力は、標準で32チャンネルを装備しています。また、別売りのアナログコンポーネント入出力用基板BKPF-101C/102Cを装着したデジタルビデオインターフェースユニットPFV-D100を使用すると、従来のアナログシステムとのインターフェースが可能になります。

入力された信号は、すべてバックグラウンド、キーフィル、キーソースとして任意に使用できます。

DME-5000とのリンクオペレーションが可能

デジタルマルチエフェクトDME-5000を接続することにより、コントロールパネルからDME-5000とスイッチャーの両方をコントロールできます。このオペレーションはDME LINK® と呼ばれ、スイッチャーのワイプとDME-5000のエフェクトを組み合わせたDMEワイプなど、高度なオペレーションが可能です。また、コントロールパネル上のメニュー操作部から、さまざまな項目についてDME-5000とスイッチャーの設定を行うことができます。

豊富なオプション群

アナログコンポーネント信号入力、クロマキー、フレームメモリーなど、用途に応じたオプション機能が用意されています。これらのオプション機能は、それぞれに別売りの基板を組み込むだけで使用することができます。

外部機器とのインターフェース

高度編集システムであるエディティングコントロールシステムBVE-9000用のインターフェースを標準装備しています。BVE-9000と接続することにより、コントロールパネルで作成したデータの保存や、キーフレームの動作シミュレーションなどが可能になります。また、デジタルビデオインターフェースユニットPFV-D100やマトリックススイッチャー、コントロールターミナル、タリー装置などの外部機器を必要に応じて接続することができます。

大規模なIC化による省電力、省スペース設計

スイッチャーとしての機能が十分に搭載されている一方、大幅なIC化による小型化、低消費電力構造が実現されています。

容易なメンテナンス

万一の故障などによるダウンタイムを短縮するため、電源、回路基板、ファンモーターなど主要部分に対しては、キャビネット前面から保守作業を行えるように配慮しています。また、回路調整機能や設定機能の多くをソフトウェアでサポートすることにより、調整ボリュームやスイッチ類の個数を最小限に抑えています。さらに、スペアパワーサプライユニットBKDS-8090を用意することにより、電源部故障時のダウンタイムを短縮することができます。

充実したスイッチャー機能

コントロールパネルには2つのM/E列と1つのPGM/PST列があり、M/E列はそれぞれ独立した2系統のキーヤーを備えています（PGM/PST列用のキーヤーは1系統のみ）。これらのキーヤーには、強力なモディファイヤーが用意されており、段階的に複雑な映像効果を作成することができます。作成データはコントロールパネルに付属している3.5インチフロッピーディスクドライブによって保存できるため、同一の効果を繰り返し効率的に使うことが可能です。詳しくは、コントロールパネルに付属の「ユーザーガイド」をご覧ください。

1-1-2. 使用上のご注意

モードスイッチの設定について

本機を使用する前に、動作モード (525/625) に合わせて、モードスイッチを正しく設定してください。モードスイッチの位置については、1-10 (J) ページをご覧ください。

プリント基板の抜き差しについて

通常はプリント基板を抜き差しすることは避けてください。

保守点検や別売り基板の取り付けなどのため、やむを得ず抜き差しするときは、以下のことを必ず守ってください。

- 基板を抜き差しする前に、必ずスイッチャーのPOWERスイッチをOFFにしてください。POWERスイッチの位置については、1-6 (J) ページをご覧ください。
- 基板を差し込んだ後、電源を入れるときは、スイッチャー内部に表示されているスロット番号と基板に表示されているスロット番号が一致していることを確認してから、POWERスイッチをONにしてください。詳しくは“2-5-2. カード基板の設置方法。”をご覧ください。

これらの注意が守られなかった場合は、回路が故障することがあります。

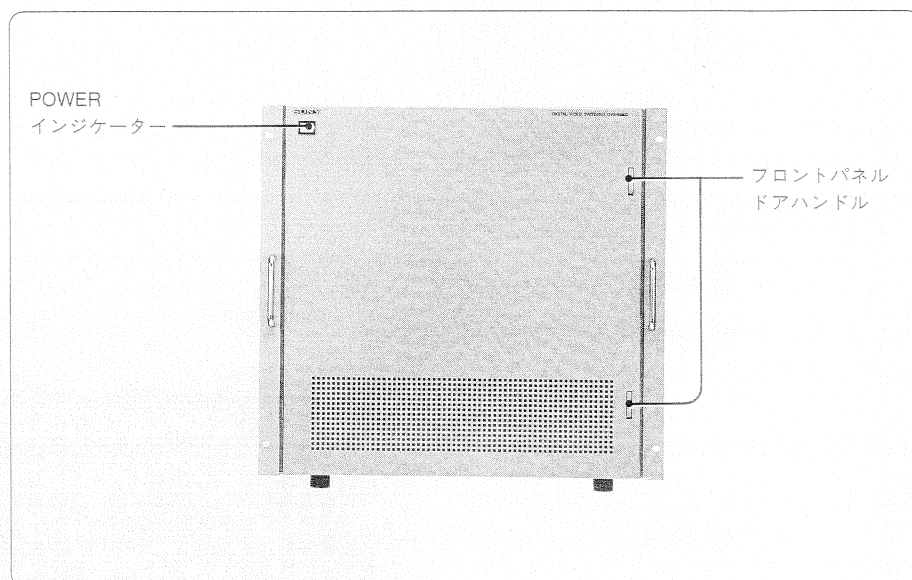
サーキットブレーカーについて

スイッチャー内部に過大な電流が流れると、サーキットブレーカーが作動して電源が自動的に切れます。POWERスイッチをONにしても通電しないときは、前面パネルを開けて、白色のBREAKERボタンを押し込んでください。BREAKERボタンの位置については、1-6 (J) ページをご覧ください。

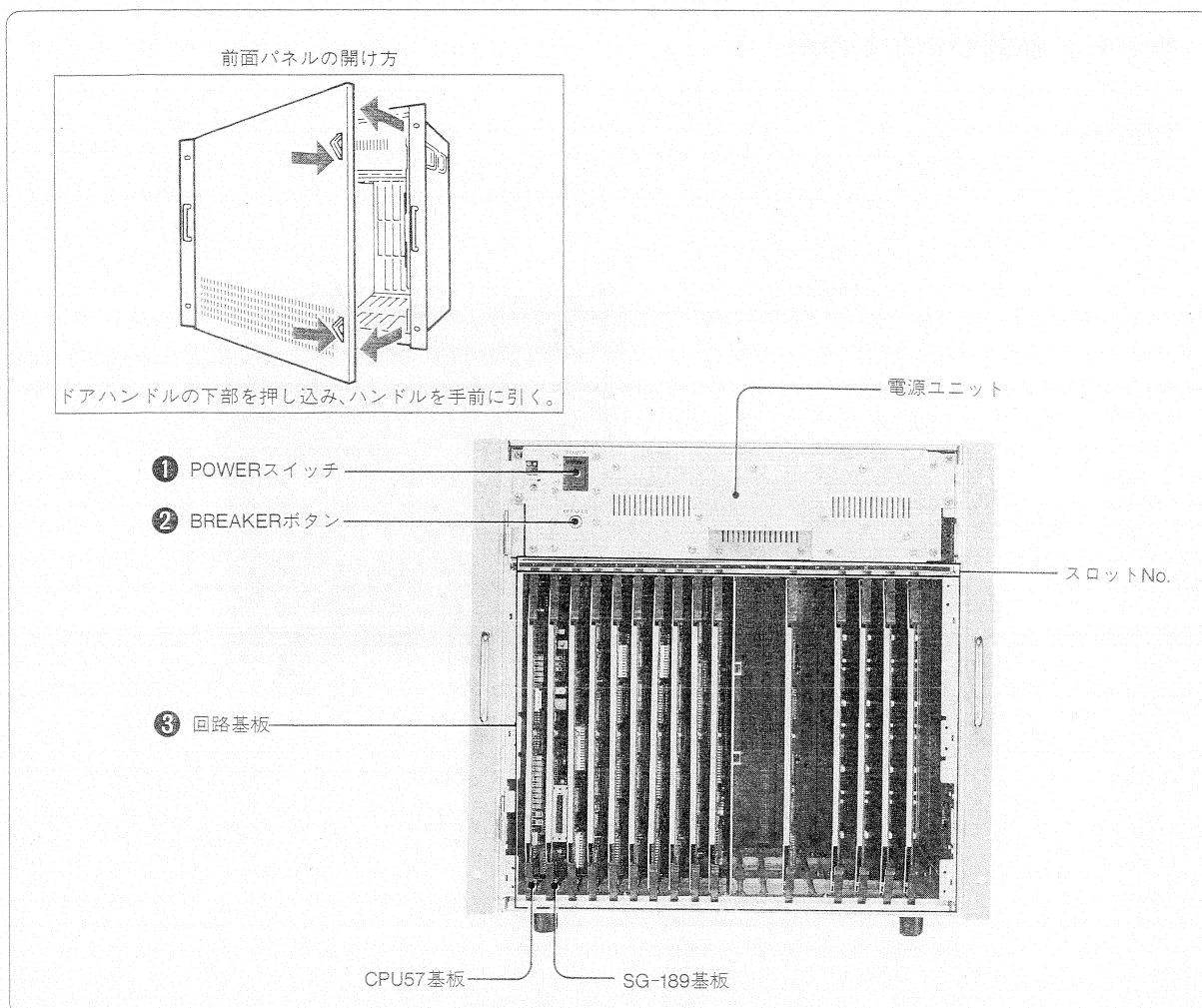
1-2. 各部の名称と働き

1-2-1. 前面パネルと内部

前面パネル



内部



① POWER（電源）スイッチ

スイッチャーの電源をON/OFFします。

② BREAKER（ブレーカー）ボタン

スイッチャー内部に過大な電流が流れると、このボタンが自動的に突出し、電源が切れます。

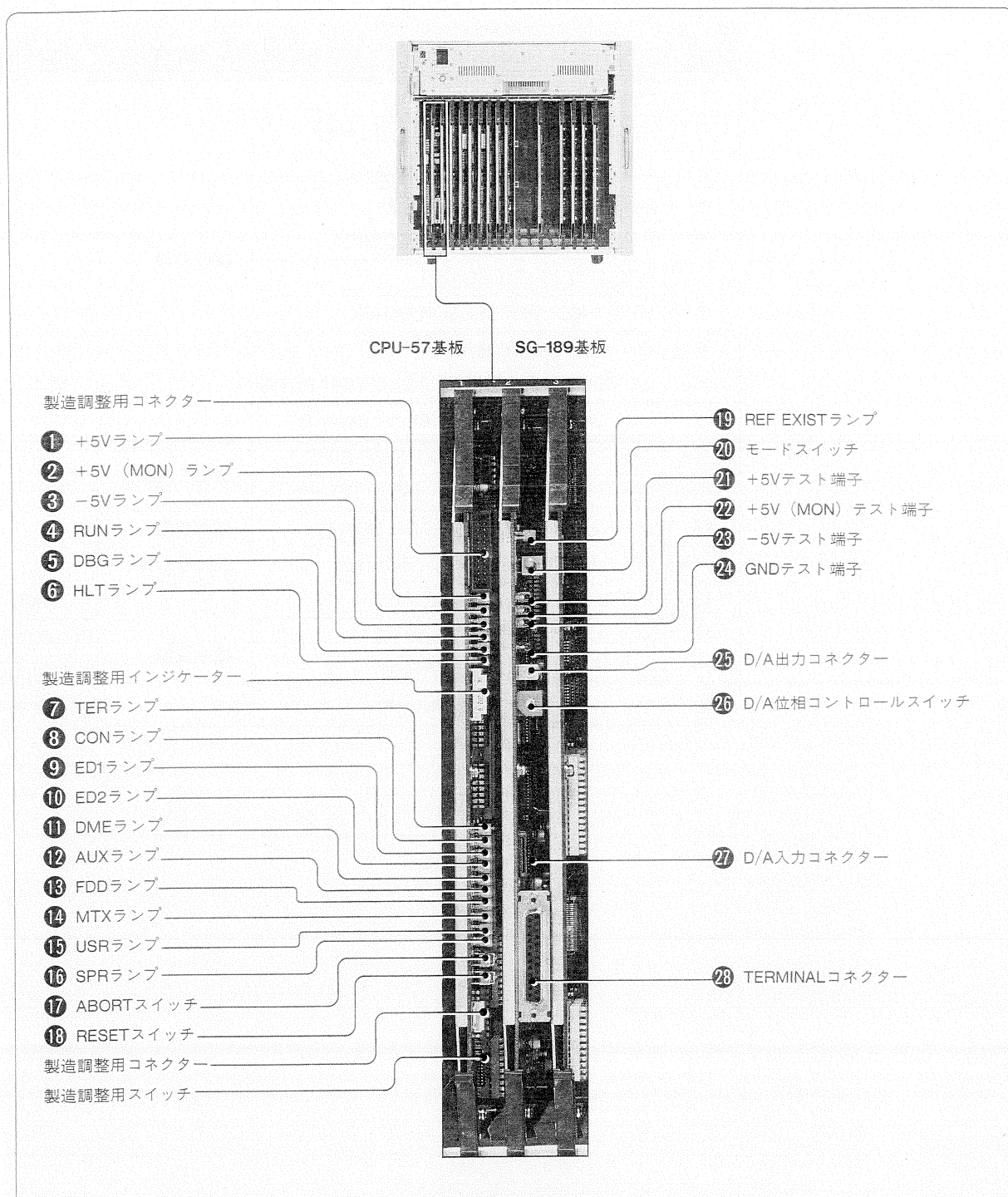
③ 回路基板

スイッチャーが動作するために必要な回路基板です。

スロットと基板の対応は次の通りです。*印のスロットには表中に示すようなオプション基板を組み込むことができます。

スロット No.	基板名称	機種名	備考
1	CPU-57 CPU BOARD	標準装備	
2	SG-189 SYNC GENERATOR BOARD		
3	WKG-5 ENHANCED WIPE BOARD		
4	WKG-4 BASIC WIPE BOARD		
5	KPC-1 KEY PROCESSOR BOARD		
6	MIX-4(A) MIXER BOARD		
7	KPC-1 KEY PROCESSOR BOARD		
8	MIX-4(A) MIXER BOARD		
9	MIX-6(A) DSK (DOWNSTREAMKEYER) BOARD		
10	OUT-2 OUTPUT PROCESSOR BOARD		
11*	CRK-4 CHROMA KEY PROCESSOR BOARD	BKDS-8031	
12*	CRK-4 CHROMAKEY PROCESSOR BORAD		
13	MAT-2 MATTE GENERATOR BOARD	標準装備	
14*	MY-50 FRAME MEMORY BOARD	BKDS-8041	
15	XPT-2 DIGITAL INPUT BOARD	標準装備	1～8ch用
16	XPT-2 DIGITAL INPUT BOARD		9～16ch用
17	XPT-2 DIGITAL INPUT BOARD		17～24ch用
18	XPT-2 DIGITAL INPUT BOARD		25～32ch用

CPU-57基板とSG-189基板には、スイッチャーの動作状況を示すランプ類をはじめ、調整やテストのための部品がキャビネット前面側に搭載されています。以下にこれらの部品について簡単に説明します。



① +5Vランプ（緑）

基板スロット1～9の+5V電源の状態を表示します。電源が正常に供給されているときは点灯しています。CPU-57基板のF1ヒューズが切れているとき、または+5V電源が供給されていないときは消えています。

② +5V（MON）ランプ（緑）

スロット10～18の+5V電源の状態を表示します。電源が正常に供給されているときは点灯し、供給されていないときは消えています。

③ -5Vランプ（緑）

システム全体の-5V電源の状態を表示します。電源が正常に供給されているときは点灯し、CPU-57基板のF2ヒューズが切れているとき、または+5V電源が供給されていないときは消えています。

④ RUN（CPU動作）ランプ（緑）

CPUの動作状態を表示します。CPUが正常に動作しているときは点灯し、停止しているときは消えています。

⑤ DBG（デバッグ用）ランプ（緑）

製造時の調整用に使います。

⑥ HLT（CPUホルト）ランプ（赤）

CPUが停止したとき点灯します。

⑦～⑯ 通信状態表示ランプ（緑）

後面パネルのコネクターに接続された機器との通信状態を表示します。それぞれのラインからデータやコマンドが入力されるたびに、点灯と消灯を交互に繰り返します。各ランプに対応するコネクター名は以下の通りです。

No.	ランプ名称	対応コネクター
7	TER	TERMINAL
8	CON	CONTROL PANEL (CONTROL)
9	EDA	EDITOR A
10	EDB	EDITOR B
11	DME	DME
12	AUX	AUX BUS
13	FDD	CONTROL PANEL (FDD)
14	MTX	MATRIX
15	USR	USER
16	SPR	SPARE

⑰ ABORT（システムアボート）スイッチ

製造時の調整用に使用します。

⑱ RESET（システムリセット）スイッチ

システムの初期化を行います。

⑲ REF EXIST（リファレンス入力）ランプ（緑）

後面パネルのREF INPUTコネクターからシンク信号（またはそれに準ずる信号）が入力されているとき点灯します。

⑳ モードスイッチ

システムの動作モードを525モードまたは、625モードに切り換えるために使用します。

②1 +5Vテスト端子 (赤)

スロット1～9の+5V電圧の測定端子です。スイッチャーの設置時やオプション基板を組み込んだときなど、電圧を再調整するために使用します。

②2 +5V (MON) テスト端子 (赤)

スロット10～18の+5V電圧の測定端子です。スイッチャーの設置時やオプション基板を組み込んだときなど、電圧を再調整するために使用します。

②3 -5Vテスト端子 (青)

システム全体の-5V電圧の測定端子です。スイッチャーの設置時やオプション基板を組み込んだときなど、電圧を再調整するために使用します。

②4 GND (アース) テスト端子 (黒)

②1～②3のテスト端子に対して基準となるGNDテスト端子です。

②5 D/A出力コネクタ

D/A入力コネクタ②7に入力されたデジタル信号がD/A変換され、このコネクタからアナログ信号として出力されます。回路調整のために使用します。

②6 D/A位相コントロールスイッチ

D/A入力コネクタ②7に入力されたデジタル信号をアナログに変換する際、クロックの位相を調整するために使用します。

②7 D/A入力コネクタ

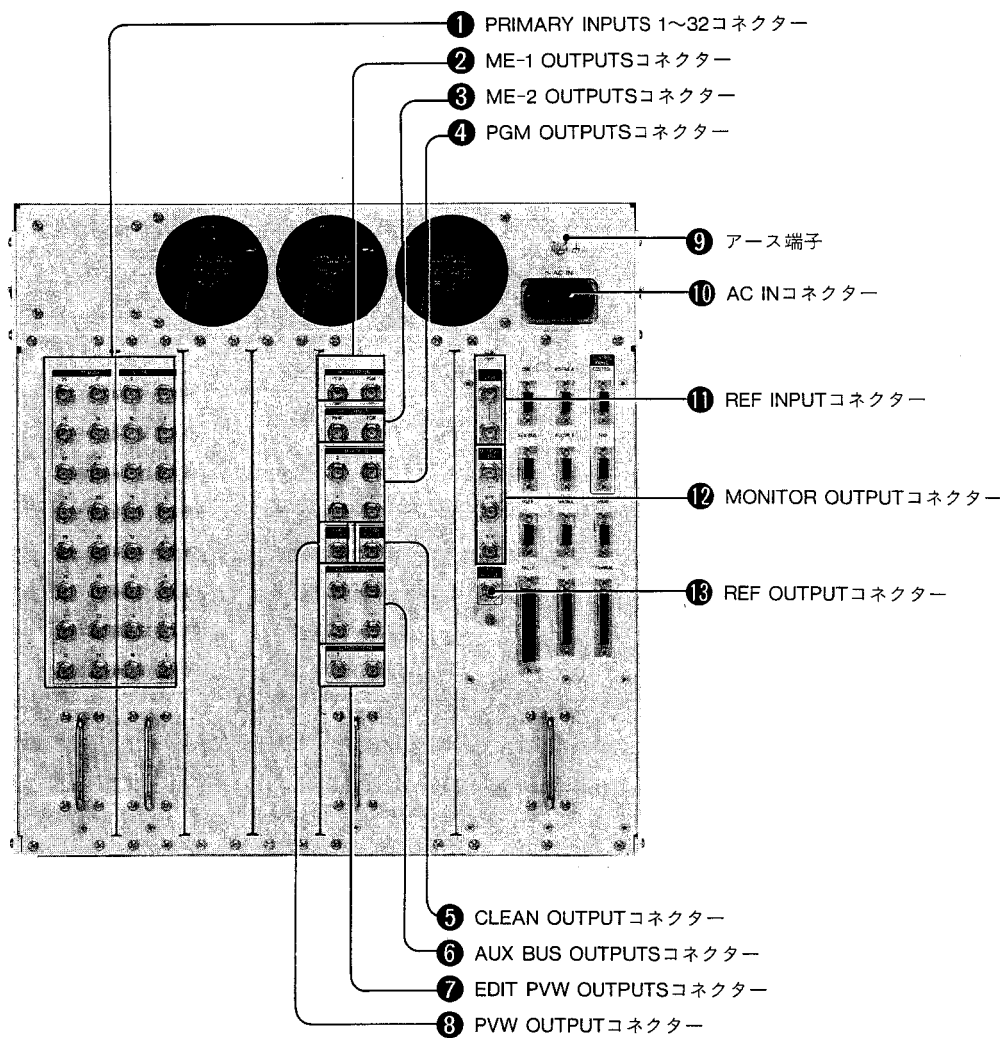
各基板上に設けられたデジタルTPコネクタにフレキシブルケーブルで接続し、デジタル信号を入力します。この信号は、アナログ信号に変換され、D/A出力コネクタ②5から出力されます。

②8 TERMINALコネクタ

コントロールターミナルに接続し、初期設定やメンテナンス時に使用します。RS-232C信号規格に準拠し、後面パネルのTERMINALコネクタと並列接続されています。

1-2-2. 後面パネル

入出力用コネクタ



① PRIMARY INPUTS (プライマリー入力) 1~32コネクター (BNC型)

シリアルデジタルビデオ信号を入力します。チャンネル数は標準装備で32チャンネルです。

② ME-1 OUTPUTS (M/E-1出力) コネクター (BNC型)

コントロールパネル上のM/E-1ブロックで作成した映像を、シリアルデジタルビデオ信号として出力します。PGMコネクターはプログラムモニターに接続し、現在作成中の映像を見るために使用します。PVWはプレビューモニターに接続し、トランジション実行後にPGMコネクターから出力される画像をあらかじめ確認するために使用します。

③ ME-2 OUTPUTS (M/E-2出力) コネクター (BNC型)

コントロールパネル上のM/E-2ブロックで作成した映像を、シリアルデジタルビデオ信号として出力します。PGMはプログラムモニターに、PVWはプレビューモニターに接続します。

④ PGM OUTPUTS (プログラム出力) コネクター (BNC型)

コントロールパネル上のPGM/PSTブロックで作成した映像を、シリアルデジタルビデオ信号として出力します。4つのコネクターがあり、スイッチャーの最終出力としてそれぞれのプログラムモニター、ビデオテープレコーダーなどに接続します。

⑤ CLEAN OUTPUT (クリーンフィード出力) コネクター (BNC型)

コントロールパネルのPGM/PSTブロックでダウンストリームキーヤーによって最終処理される前の映像を出力します。

⑥ AUX BUS OUTPUTS (補助バス出力) 1~4コネクタ (BNC型)

スイッチャーには、DMEなどの外部機器への出力用に4本の補助バス (AUX1~4) があり、それぞれのバスごとに選択した信号がこのコネクタから出力されます。各バスに割り当てる信号は、コントロールパネル上で選択します。

⑦ EDIT PVW OUTPUTS (エディットプレビュー出力) 1、2コネクタ (BNC型)

コントロールパネル上でプレビューバス (PVW) 出力として選択された信号を出力します。編集機などからスイッチャーをコントロールする場合のモニター出力などに使用します。2つのコネクタから同じ信号が出力されます。

また、この出力信号と同じ内容のアナログ信号が、MONITOR OUTPUTコネクタ⑫から出力されます。

⑧ PVW OUTPUT (プレビュー出力) コネクタ (BNC型)

コントロールパネル上のPGM/PSTブロックにおけるエフェクトトランジション実行後にPGM OUTPUTSコネクタ④から出力される映像を出力します。プレビューモニターに接続し、最終出力画像を前もって確認するために使用します。

⑨ アース端子

システムの接地線に接続します。

⑩ AC IN (AC電源入力) コネクタ

付属の電源コードで90~264VのAC電源に接続します。

⑪ REF INPUT (リファレンスビデオ入力) コネクタ (BNC型)

スイッチャーを外部同期信号に同期させて使用するとき、アナログのリファレンスビデオ信号 (シンク信号) をこのコネクタに入力します。2つのコネクタはループスルーになっており、どちらか一方に入力した信号をそのまま他方から出力することができます。ループスルー出力を使用しない場合は、付属の75Ω終端器で必ず終端してください。

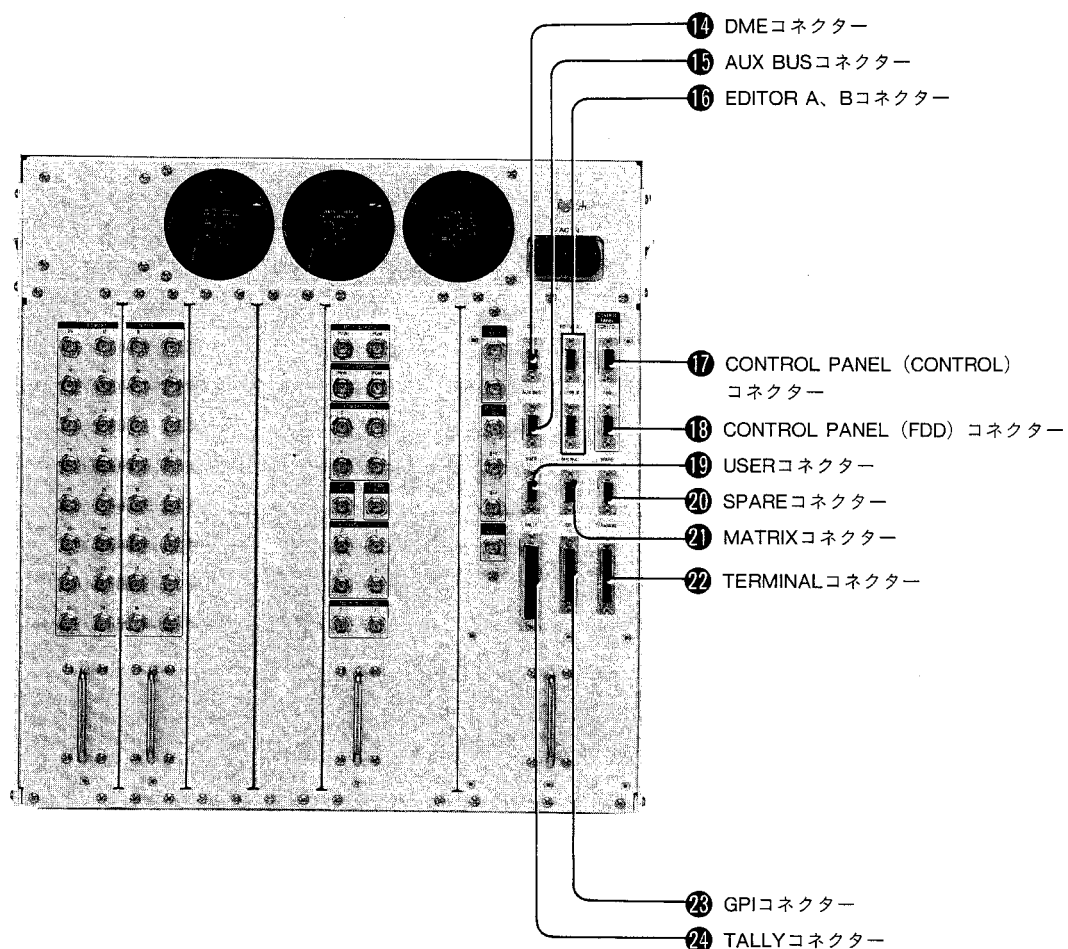
⑫ MONITOR OUTPUT (モニター出力) コネクター (BNC型)

プレビューバス (PVW) のアナログ出力用コネクターです。EDIT PVW OUTPUTSコネクター⑦から出力される信号と同じ内容のアナログ信号を出力します。

⑬ REF OUTPUT (リファレンス信号出力) コネクター (BNC型)

アナログのリファレンスビデオ信号 (シンク信号) を出力します。REF INPUTコネクター⑪に入力されている基準信号に対するこの信号の位相は、コントロールパネルから±1Hの範囲で調整することができます。

インターフェース用コネクタ



⑭ DME (デジタルマルチエフェクト) コネクター (D-SUB 9ピン)

デジタルマルチエフェクトDME-5000に接続します。RS-422A信号規格に準拠しています。

⑮ AUX BUS (補助バス) コネクター (D-SUB 9ピン)

スイッチャー内部の補助バス (AUX1~4) を制御するために使用します。RS-422A信号規格に準拠しています。2台目のDME-5000を接続する場合に使用します。

⑯ EDITOR (エディター) A、Bコネクター (D-SUB 9ピン)

エディティングコントロールシステムBVE-9000などの外部機器に接続すると、その外部機器からスイッチャーを制御できるようになります。通常はAコネクターを使用します (Bコネクターは機能拡張用です)。

⑰ CONTROL PANEL (CONTROL) (コントロール) コネクター (D-SUB 9ピン)

コントロールパネルBKDS-8010などに接続します。RS-422Aインターフェースを介して、コントロールパネルからスイッチャーを操作するために使用します。

⑱ CONTROL PANEL (FDD) (フロッピーディスクドライブ) コネクター (D-SUB 9ピン)

コントロールパネルBKDS-8010などに接続します。RS-422Aインターフェースを介して、コントロールパネルに接続されているフロッピーディスクドライブを制御するために使用します。

⑲ USER (ユーザー制御) コネクター (D-SUB 9ピン)

将来のシステム拡張用のコネクターです。RS-422A信号規格に準拠しています。

⑳ SPARE (制御用スペア) コネクター (D-SUB 9ピン)

スペアの制御用コネクターで、工場内でのみ使用します。RS-422A信号規格に準拠しています。

㉑ MATRIX (マトリックス) コネクター (D-SUB 9ピン)

外部のマトリックススイッチャーなどに接続します。RS-422A信号規格に準拠しています。

②② TERMINAL (ターミナル) コネクター (D-SUB 25ピン)

スイッチャーの初期設定や保守点検を行うとき、コントロールターミナルに接続します。RS-232C信号規格に準拠しており、スイッチャー内部のSG-189基板上のTERMINALコネクターと並列接続されています。

②③ GPI (汎用入出力) コネクター (D-SUB 25ピン)

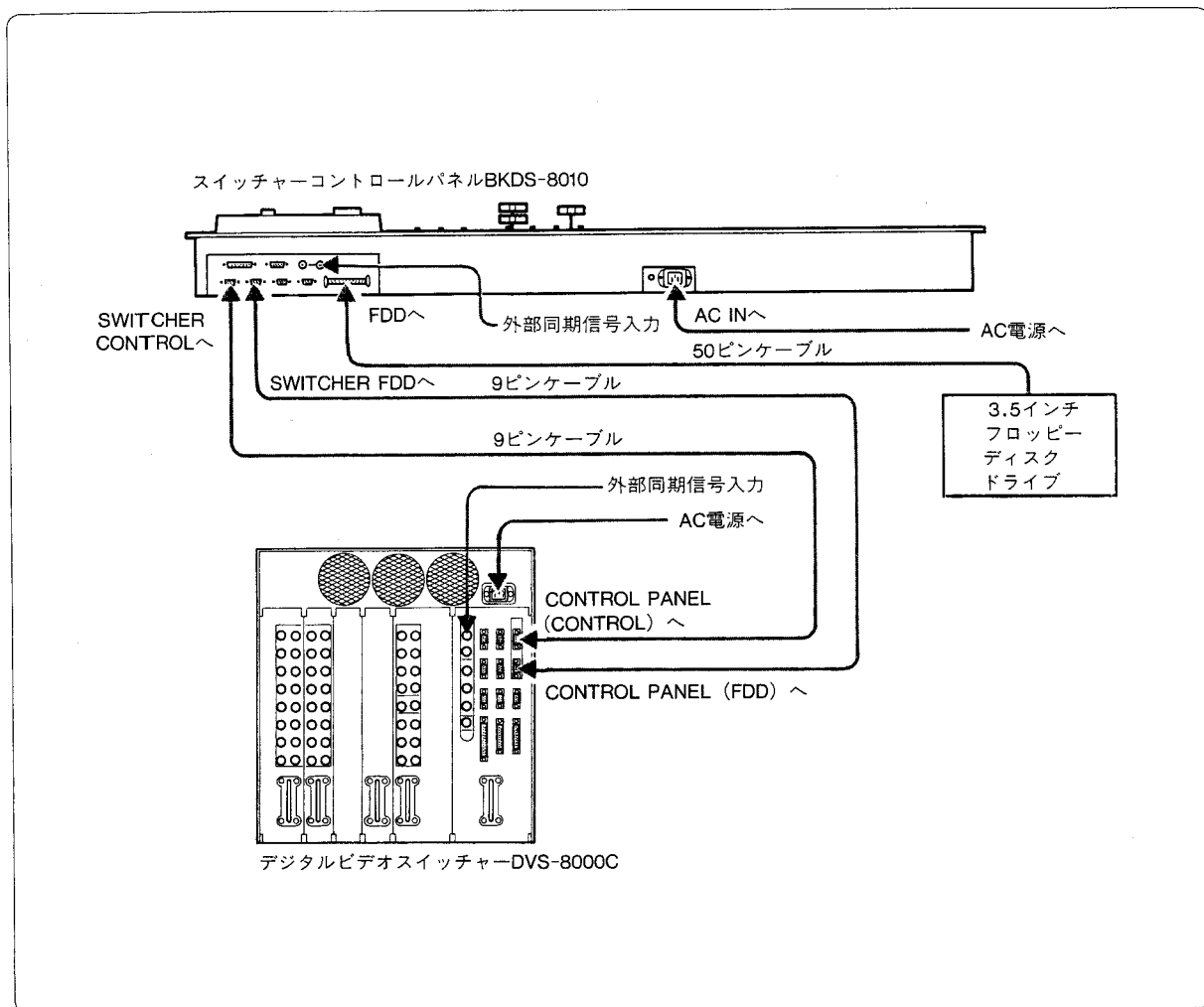
外部機器に接続し、トリガーの入出力を行うために使用します。入力8系統、出力7系統が用意されており、これらに対して入出力条件のプログラムが可能です。

②④ TALLY (タリー出力) コネクター (D-SUB 50ピン)

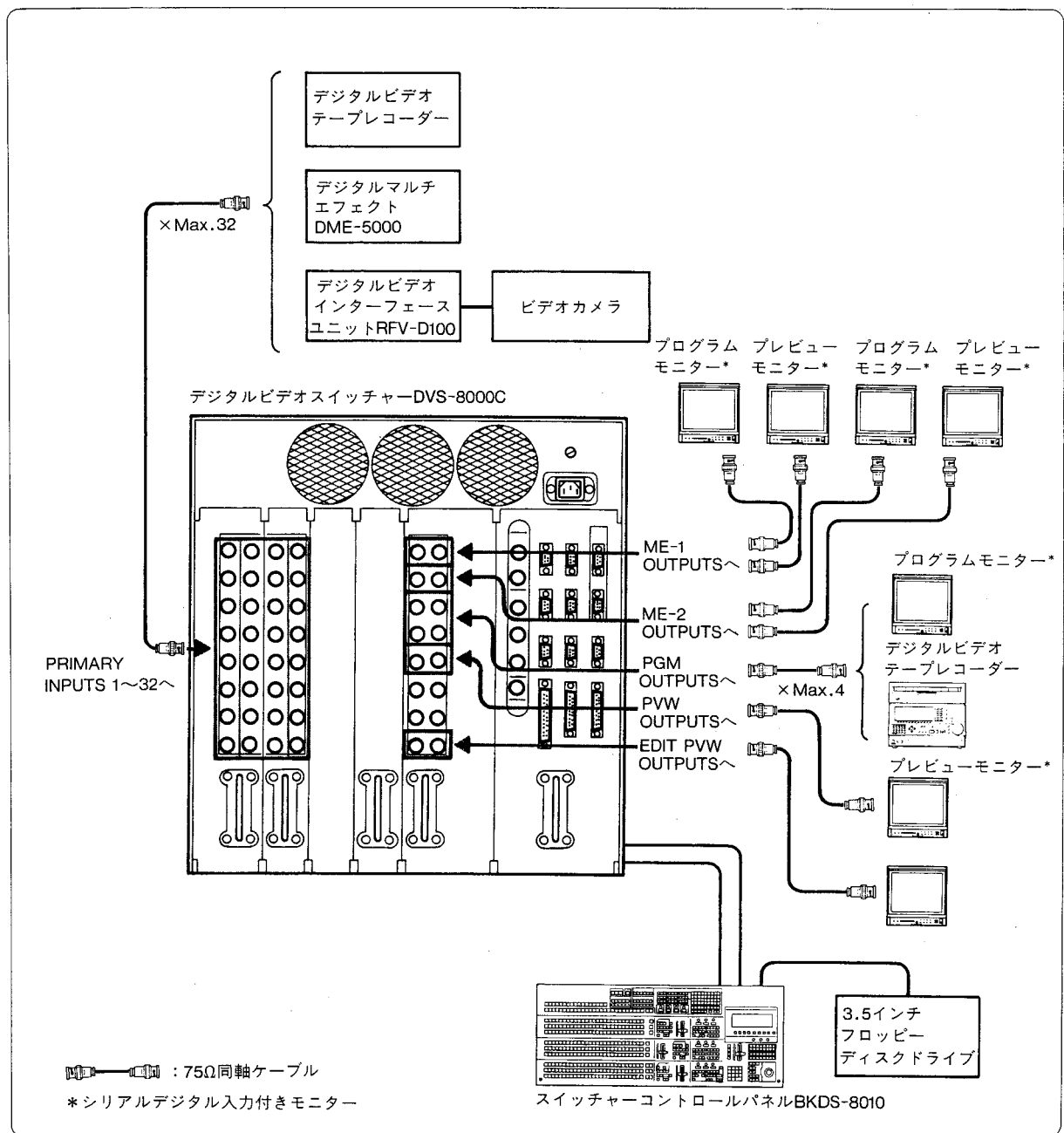
現在どの信号が選択されているかを外部に知らせるためのタリー信号を出力します。プライマリー入力1～32および内部クロマキー入力1、2、ME-1、ME-2などの選択状態を表示することができます。

1-3. システム構成例

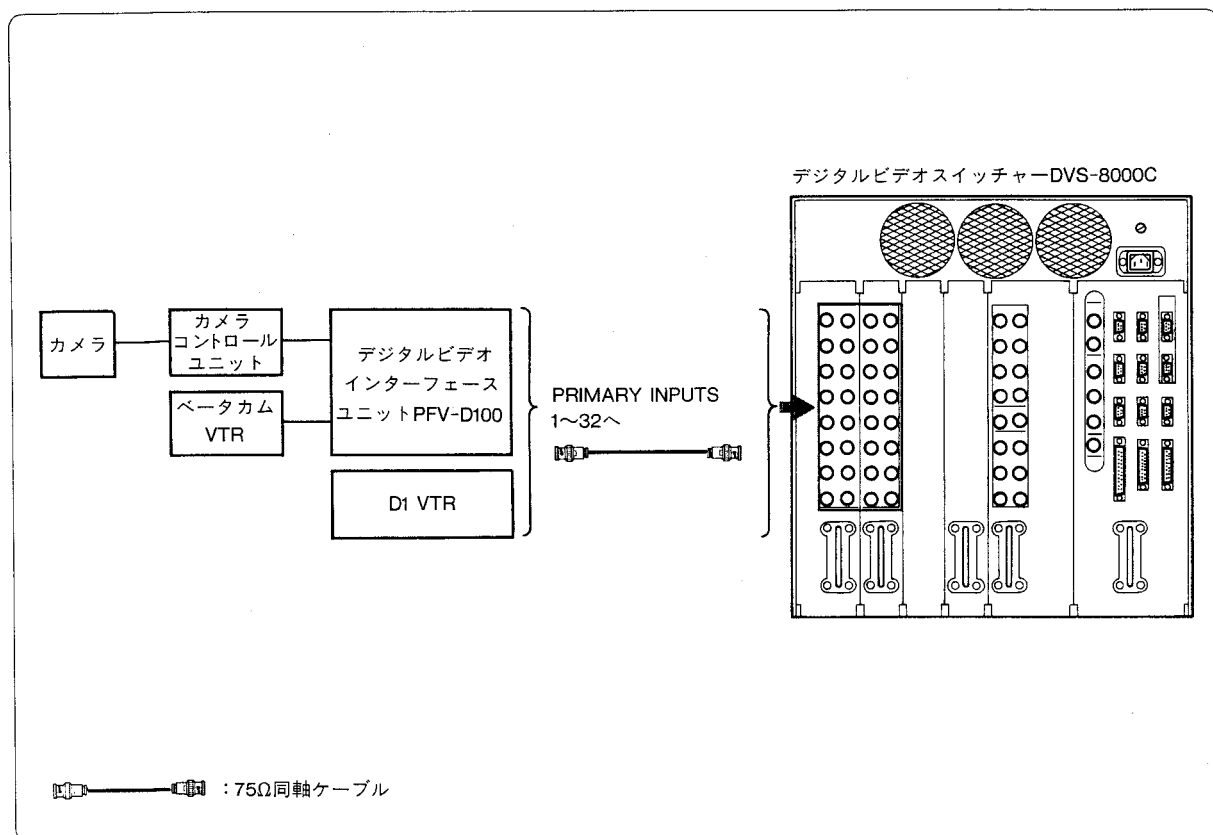
1-3-1. コントロールパネルとの接続



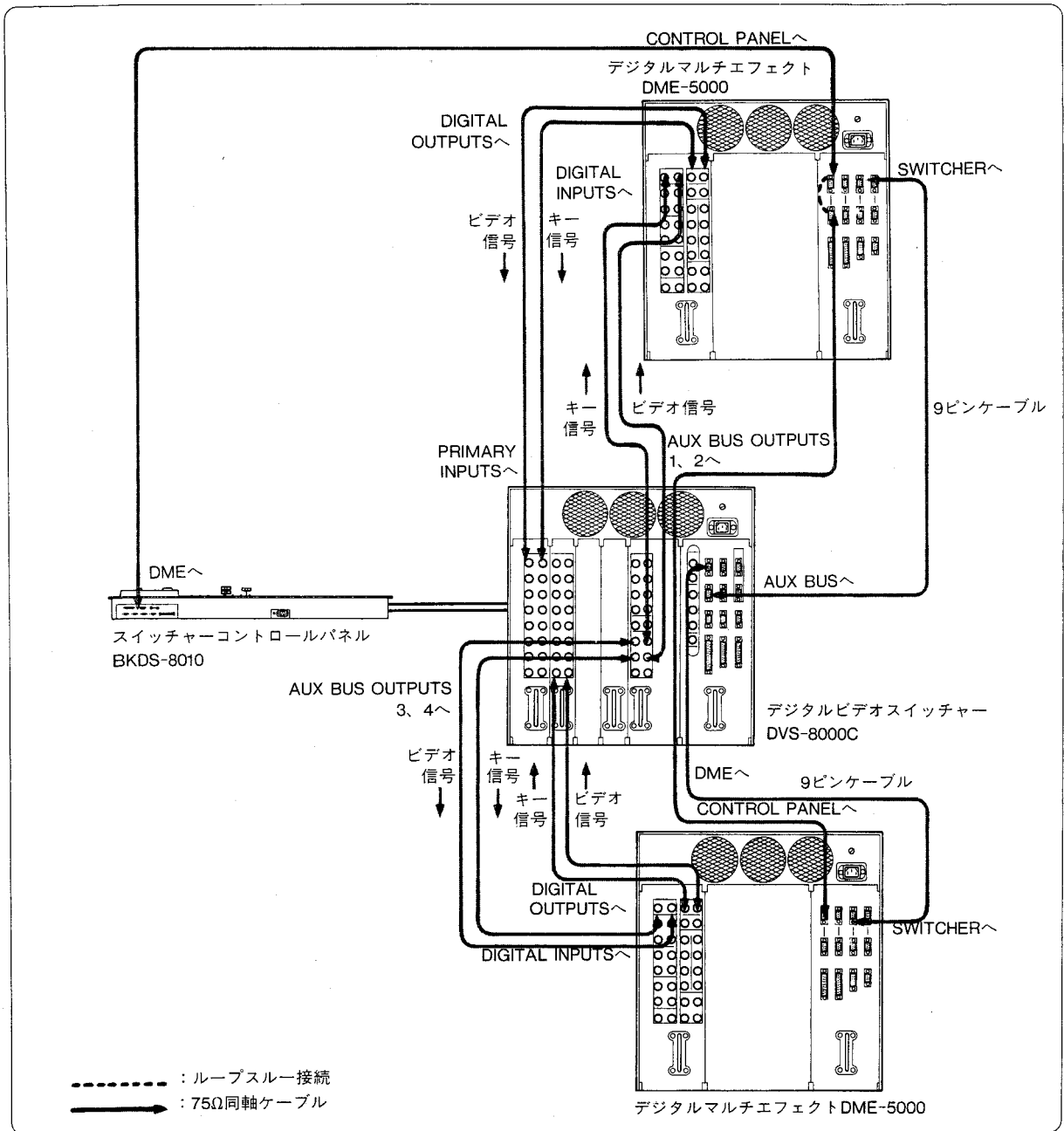
1-3-2. プライマリー入力とビデオモニターとの接続



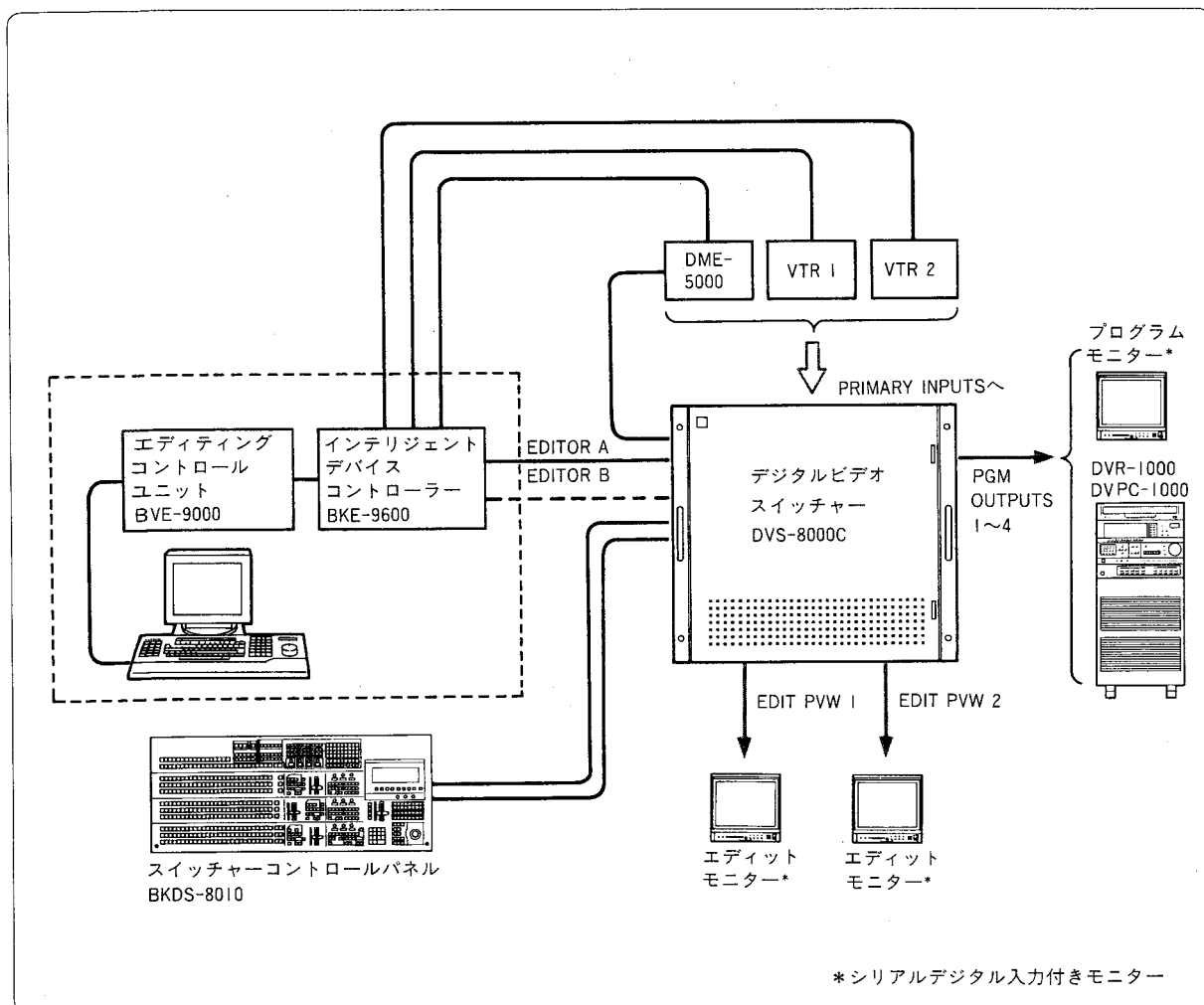
1-3-3. 外部クロマキーソースとの接続



1-3-4. デジタルマルチエフェクトDME-5000との接続



1-3-5. エディティングコントロールシステムBVE-9000との接続



1-4. 主な仕様

一般

電源	AC 90～264V、50/60Hz
消費電力	最大300W
温度範囲	5～40°C（動作） 10～35°C（性能）
外形寸法	424×443×450mm（幅／高さ／奥行き）（突起物を除く）
重量	50kg

入出力コネクタ

PRIMARY INPUTS	シリアルデジタルビデオ信号入力 BNC型（×32） レベル：800mV±10%、75Ω リターンロス：15dB（5～270MHz）
MONITOR OUT	アナログビデオ信号出力（Y、B-Y、R-Y）、BNC型（×3） ビデオバンド幅：フラット～5.0MHz±0.5dB（Y） フラット～2.0MHz±0.5dB（B-Y、R-Y）
REF INPUT	アナログシンク信号入力、BNC型（×2） ループスルー付き レベル：0.2～5V
REF OUTPUT	アナログシンク信号出力、BNC型（×1） レベル：シンク：2V±20mV 位相調整幅：±1H システム位相調整幅：+0.5H～1.0H

ME-1 OUTPUT PGM/PVW	シリアルデジタルビデオ信号出力、BNC型 (×2)、75Ω レベル：800mV±10% 伝送速度：270Mbps
ME-2 OUTPUT PGM/PVW	シリアルデジタルビデオ信号出力、BNC型 (×2)、75Ω レベル：800mV±10% 伝送速度：270Mbps
PGM OUTPUT	シリアルデジタルビデオ信号出力、BNC型 (×4)、75Ω レベル：800mV±10% 伝送速度：270Mbps
PVW OUTPUT	シリアルデジタルビデオ信号出力、BNC型 (×1)、75Ω レベル：800mV±10% 伝送速度：270Mbps
CLEAN OUTPUT	シリアルデジタルビデオ信号出力、BNC型 (×1)、75Ω レベル：800mV±10% 伝送速度：270Mbps
AUX BUS OUTPUTS	シリアルデジタルビデオ信号出力、BNC型 (×4)、75Ω レベル：800mV±10% 伝送速度：270Mbps
EDIT PVW OUTPUT 1、2	シリアルデジタルビデオ信号出力、BNC型 (×2)、75Ω レベル：800mV±10% 伝送速度：270Mbps
AC IN	AC電源入力、3ピンACコネクタ (×1)

リモートコントロール信号

CONTROL PANEL (CONTROL)	RS-422A信号規格準拠	D-SUB 9ピン
CONTROL PANEL (FDD)	RS-422A信号規格準拠	D-SUB 9ピン
EDITOR A	RS-422A信号規格準拠	D-SUB 9ピン
EDITOR B	RS-422A信号規格準拠	D-SUB 9ピン
DME	RS-422A信号規格準拠	D-SUB 9ピン
AUX BUS	RS-422A信号規格準拠	D-SUB 9ピン
MATRIX	RS-422A信号規格準拠	D-SUB 9ピン
USER	RS-422A信号規格準拠	D-SUB 9ピン
TERMINAL	RS-232C信号規格準拠	D-SUB 25ピン
GPI	TTL入力×8	
	リレー接点出力 (AC/DC 最大30V、0.1A*)×7	
	D-SUB 25ピン	
TALLY	リレー接点出力 (AC/DC 最大30V、0.1A*)×7	
	D-SUB 50ピン	

*抵抗負荷の場合

付属品

ラックアングル (1式) (本体に取り付け済み)
延長基板 (EX-209) (1)
電源コード (3)
電源コード用プラグアダプター (1)
75Ω終端器 (1)
オペレーション アンド メンテナンスマニュアル

別売り機器

スイッチャーコントロールパネル BKDS-8010

クリーンクロマキーボード BKDS-8031

フレームメモリーボード BKDS-8041

スペアパワーサプライユニット BKDS-8090

関連機器

デジタルマルチエフェクト DME-5000/9000

DME-5000用コントロールパネル BKDM-5070

DME-9000用コントロールシステム BKDM-9010

エディティングコントロールシステム BVE-9000

本機の仕様および外観は、改良のため予告なく変更することがありますが、ご了承ください。

Manuals for the DVS-8000C Digital Video Switcher System

The DVS-8000C digital video switcher forms the processor component of a complete DVS-8000C switcher system, when used together with a BKDS-8010 switcher control panel.

The following manuals accompany the two products.

DVS-8000C operation and maintenance manual

(This manual. Supplied with the switcher.)

Section 1 "OPERATION" gives an overview of the DVS-8000C system, explains the parts of the switcher, and gives example system configurations. Personnel in charge of management of the overall video switcher system are required to read this section first. Section 2 and following sections cover system installation and maintenance. Consult them for regular maintenance requirements and also for error-finding in the event of a malfunction.

DVS-8000/8000C user's guide

(Supplied with the control panel.)

This describes the parts of the control panel and explains how to use the DVS-8000C system—keep it handy for reference. Note that it also covers the use of the system with a DME-5000 digital multi effects when connected.

BKDS-8010 maintenance manual

(Supplied with the control panel.)

This describes the hardware of the control panel, and will be required for installation and maintenance.

Section 1 OPERATION

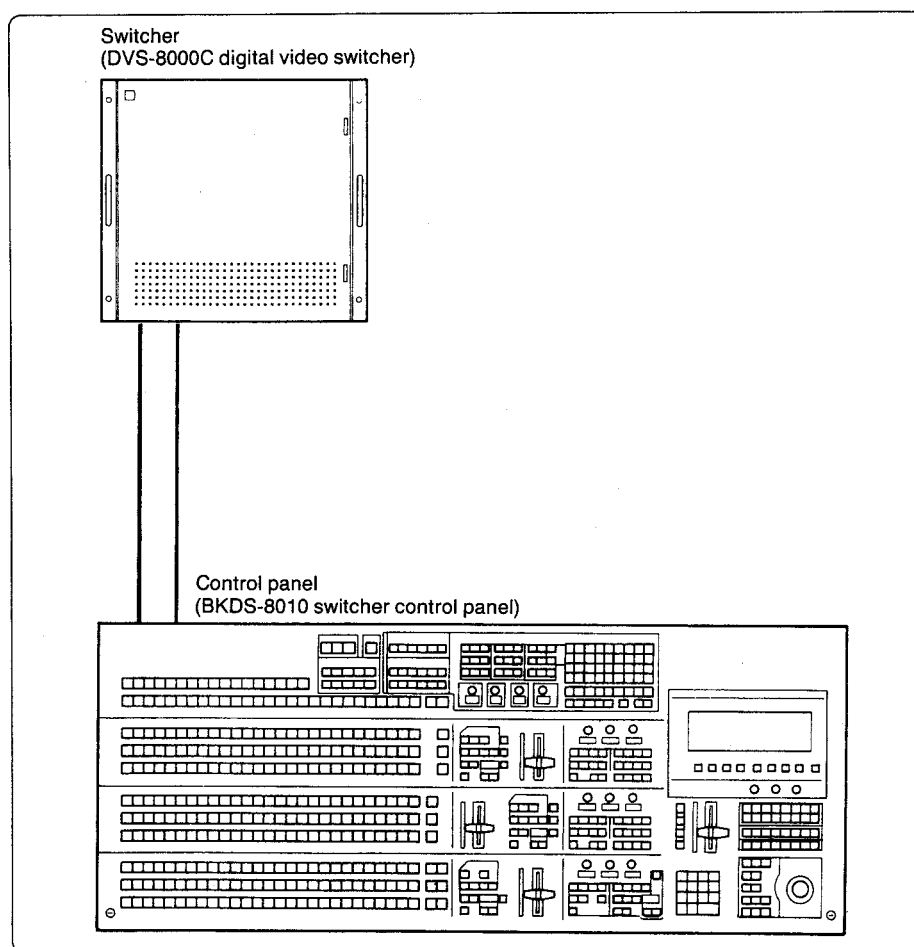
1-1. Overview

The DVS-8000C digital video switcher is a high performance switcher for D1 format, for use in broadcast studio and post- production systems. The switcher is normally operated from a BKDS-8010 Control Panel (supplied separately).

Note that section 1 of this manual uses the following terms to refer to the system components:

Switcher: DVS-8000C digital video switcher

Control panel: BKDS-8010 switcher control panel



1-1-1. Principal Features

High picture quality and high stability ensured by completely digital processing

All internal processing of the serial digital input signals from video sources such as D1 format video tape recorders is digital, and the processed signals are output without conversion, as serial digital signals. The processing word length is 10 bits at I/O interfaces and a maximum of 14 bits internally, thus minimizing characteristic degradation of video signals. This ensures full exploitation of the greatest advantage of digital processing over analog—significantly higher picture quality—to produce really high level video effects. Since the input unit is provided with a buffer memory, there is automatic phase correction to within ± 0.5 H with respect to the reference signal, and even if the input signal carries some jitter, this can be stabilized.

Serial digital format for all I/O

All digital I/O is handled in serial form, so that it can be transmitted by a single 75 ohm coaxial cable. Making connections is much simpler than with a conventional parallel transmission system, and the overall complexity of the system is reduced. Furthermore, transmission distance can be much greater without significant degradation.

Multiple channels of primary input

The switcher is provided with 32 channels of digital primary input as standard. To allow interfacing with existing analog systems, optional PFV-D100 digital video interface unit fitted with the optional BKPF-101C AD converter board and/or BKPF-102C DA converter board is available.

Any of the input signals can be used for background, key fill or key source.

Operation with DME-5000

If the DME-5000 digital multi effects is connected, both the switcher and the DME-5000 can be controlled from the same control panel. Such combined operation called DME LINK® allows powerful operations such as DME wipe effects, which combine effects with the switcher wipe operation. The control panel provides interactive control of the switcher and the DME-5000 through a menu system.

Wide range of option boards

Many options are available, such as analog component signal input, chroma keyer and frame memory. Each of these optional functions can be implemented simply by installing an extra board.

External interfaces

The switcher can be interfaced with a high-level editing system, such as a BVE-9000 editing control system, allowing data from the control panel to be stored, and providing a simulation function for key frame operations. Additionally, other devices such as matrix switchers, control terminals, tally devices or a PFV-D100 digital video interface unit can be connected as required.

LSI architecture

The high functionality of the switcher is implemented in LSI, for compactness and low power consumption.

Ease of maintenance

In the event of a fault, principal components of the unit, including the power supply, circuit boards and fan motor can be replaced from the front, to reduce downtime. Variable resistors and switches on the boards have been kept to the minimum, using software control as far as possible. The optional BKDS-8090 spare power supply unit will further reduce downtime due to a fault of the power supply.

Powerful switcher functionality

The control panel has two M/E banks, each capable of controlling two separate keyers, and one PGM/PST bank capable of controlling a separate keyer. These keyers are provided with a powerful range of modifying functions, so that complicated video effects can be constructed step by step. The 3.5" floppy disk drive, a standard accessory to the control panel, allows effects built in this way to be stored and repeated later. For more details see the user guide supplied with the control panel.

1-1-2. Important Notes

Setting the mode switch

Before using the switcher, set the mode switch according to the operation mode (525/625).
For the position of the mode switch, refer to page 1-10(E).

Fitting and removing circuit boards

Do not remove circuit boards unless absolutely necessary.

When fitting option boards or removing any board for maintenance, follow these guidelines.

- Ensure that the power of the switcher is turned off before fitting or removing boards. See page 1-6(E) for location of the power switch.
- Before turning the power on after fitting the board, ensure that the slot number indicated inside the switcher cabinet matches the one on the board fitted. For more details refer to 2-5-2 "Installation of Card Boards".

Failure to observe these precautions can lead to damage to the circuit.

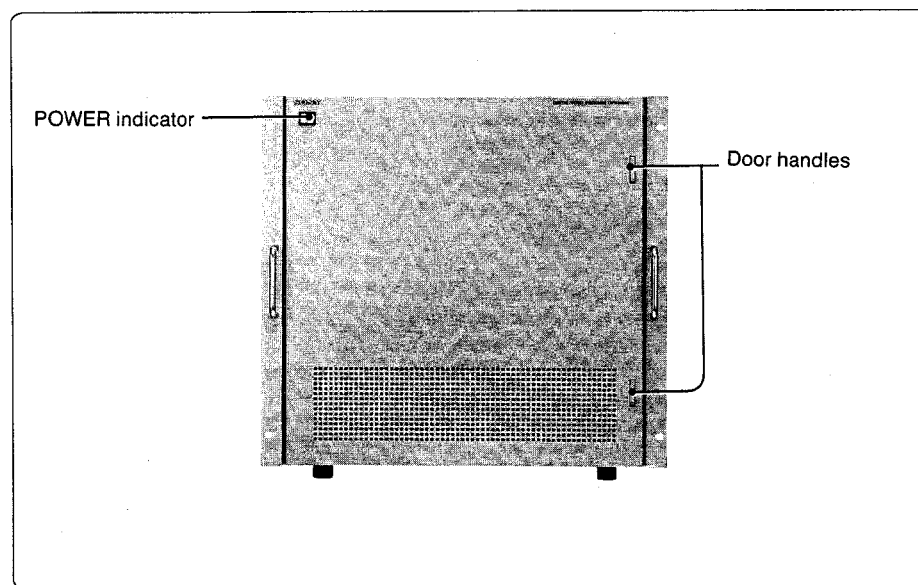
Circuit breaker

If an excessive current flows, the circuit breaker automatically cuts off the power. If the current is not drawn by putting the POWER switch in the ON position, open the front panel and press the white breaker button. Refer to page 1-6(E) for location of the breaker button.

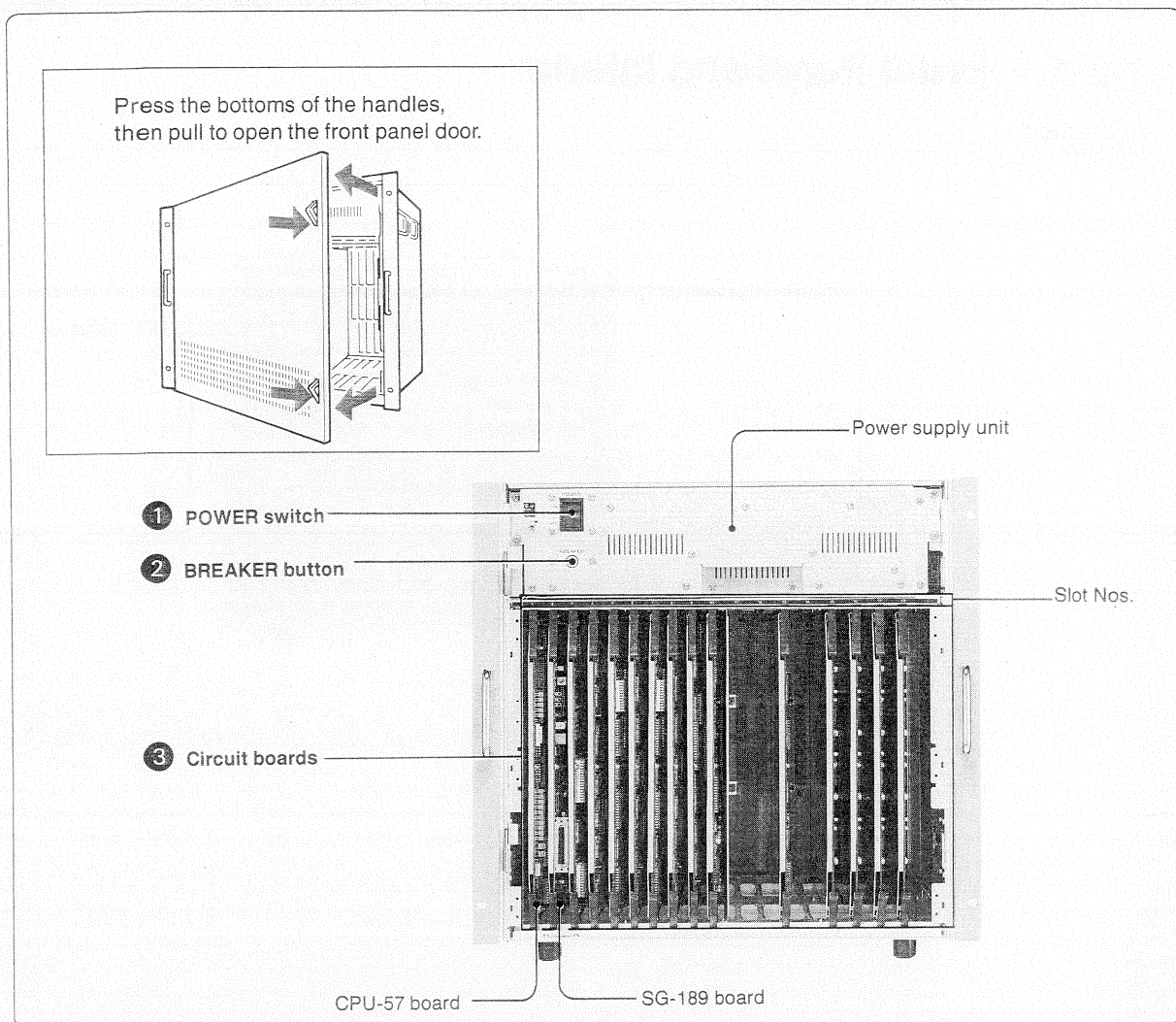
1-2. Location and Function of Parts

1-2-1. Front Panel and Interior

Front panel



Interior



1 POWER switch

Powers the switcher on and off.

2 BREAKER button

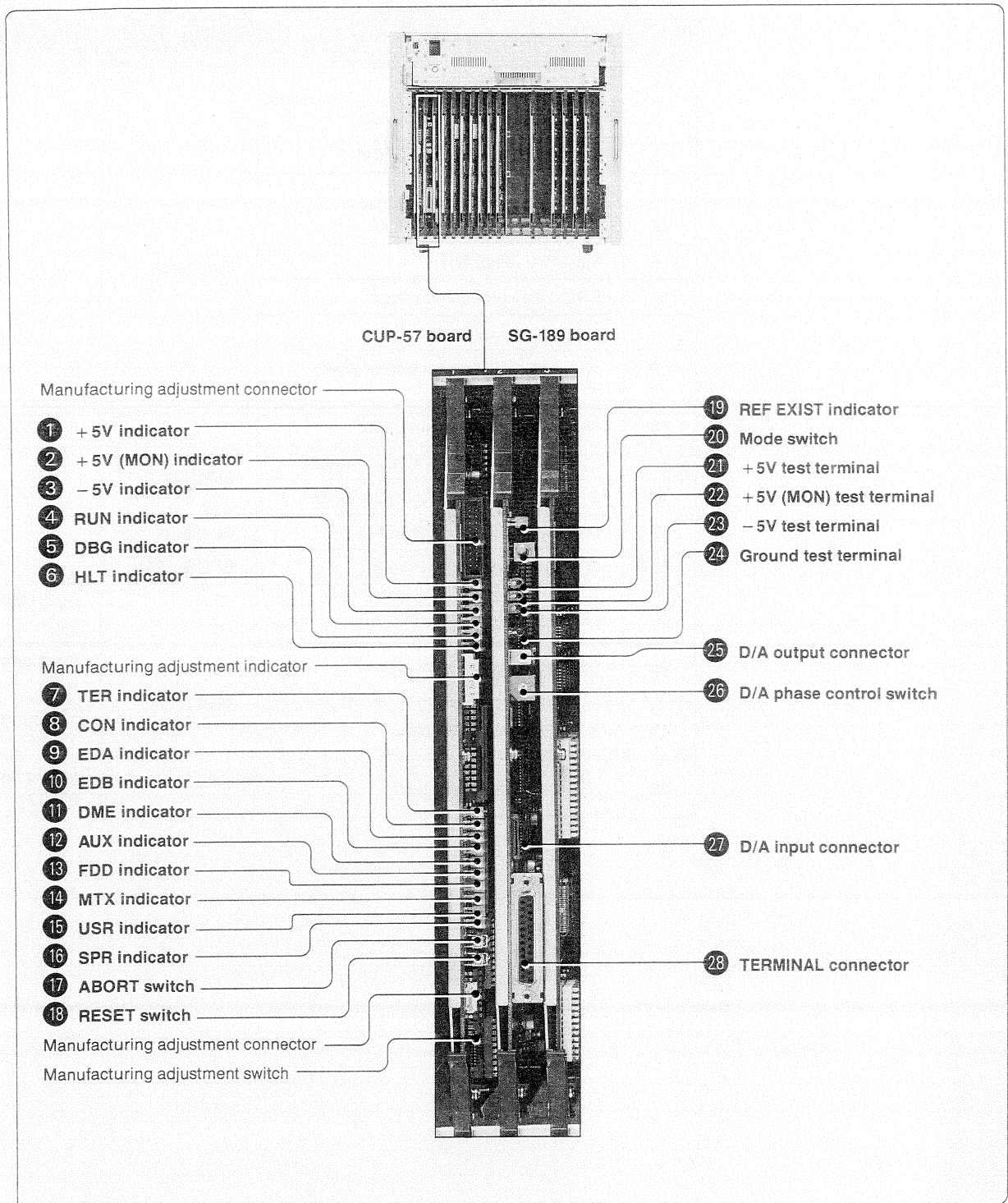
If the built-in breaker trips because of an excessive current in the unit, the power will be cut off and this button will jump out.

3 Circuit boards

The boards in the 18 slots are as follows. Slots for optional boards are marked with an asterisk.

Slot No.	Board name	Supplied as	Remarks
1	CPU-57 CPU board	Standard	
2	SG-189 sync generator board		
3	WKG-5 enhanced wipe board		
4	WKG-4 basic wipe board		
5	KPC-1 key processor board		
6	MIX-4 (A) mixer board		
7	KPC-1 key processor board		
8	MIX-4 (A) mixer board		
9	MIX-6 (A) DSK (downstream keyer) board		
10	OUT- output processor board		
11*	CRK-4 chroma key processor board	BKDS-8031	
12*	CRK-4 chroma key processor board		
13	MAT-2 matte generator board	Standard	
14*	MY-50 frame memory board	BKDS-8041	
15	XPT-2 digital input board	Standard	for channels 1-8
16	XPT-2 digital input board		for channels 9-16
17	XPT-2 digital input board		for channels 17-24
18	XPT-2 digital input board		for channels 25-32

The CPU-57 and SG-189 boards have indicators for showing switcher operation statuses and components for adjustments and tests, mounted on the side facing the front panel. These components are described below.



- ① **+5V indicator (green)**
When this indicator is on, it indicates that the +5 V power to slots 1 to 9 is being supplied normally. It goes off if the fuse F1 on the CPU-57 board blows, or the power supply has failed.
- ② **+5V (MON) indicator (green)**
When this indicator is on, it indicates that the +5 V power to slots 10 to 18 is being supplied normally. It goes off if the +5 V power supply has failed.
- ③ **-5V indicator (green)**
When this indicator is on, it indicates that the -5 V power for the whole system is being supplied normally. It goes off if the fuse F2 on the CPU-57 board blows, or if the +5 V power supply has failed.
- ④ **RUN indicator (green)**
This indicator is on when the CPU is operating normally and off when it is halted.
- ⑤ **DBG (debugging) indicator (green)**
This indicator is only used for adjustment during manufacture.
- ⑥ **HLT (halt) indicator (red)**
This indicator is on when the CPU is halted.
- ⑦ to ⑯ **Communications status indicators (green)**
These indicators show the status of the connectors on the rear panel. Each one lights intermittently when data is being input from the corresponding line. The correspondence between indicators and connectors is shown in the following table.

No.	Indicator	Connector
7	TER	TERMINAL
8	CON	CONTROL PANEL (CONTROL)
9	EDA	EDITOR A
10	EDB	EDITOR B
11	DME	DME
12	AUX	AUX BUS
13	FDD	CONTROL PANEL (FDD)
14	MTX	MATRIX
15	USR	USER
16	SPR	SPARE

- ⑰ **ABORT switch**
This switch is only used for adjustment during manufacture.
- ⑱ **RESET switch**
This switch re-initializes the system.
- ⑲ **REF EXIST indicator (green)**
This indicator is on when a sync signal (or equivalent) is input to the REF INPUT connector on the rear panel.

20 Mode switch

Use this switch to set the operation mode of the system to either 525-line or 625-line mode.

21 +5V test terminal (red)

Use this terminal to check the +5 V supply to slots 1 to 9. Adjustment of the power supply may be necessary when installing the switcher, or when adding optional boards.

22 +5V (MON) test terminal (red)

Use this terminal to check the +5 V supply to slots 10 to 18. Adjustment of the power supply may be necessary when installing the switcher, or when adding optional boards.

23 -5V test terminal (blue)

Use this terminal to check the -5 V supply to the whole system. Adjustment of the power supply may be necessary when installing the switcher, or when adding optional boards.

24 Ground test terminal (black)

This is the return connector when testing any of the terminals 21 to 23.

25 D/A output connector

The digital signal input to the D/A input connector 27 is converted to an analog signal which is output from this connector. Use for circuit adjustment purposes.

26 D/A phase control switch

This adjusts the clock phase for D/A conversion of the signal input to the D/A input connector 27.

27 D/A input connector

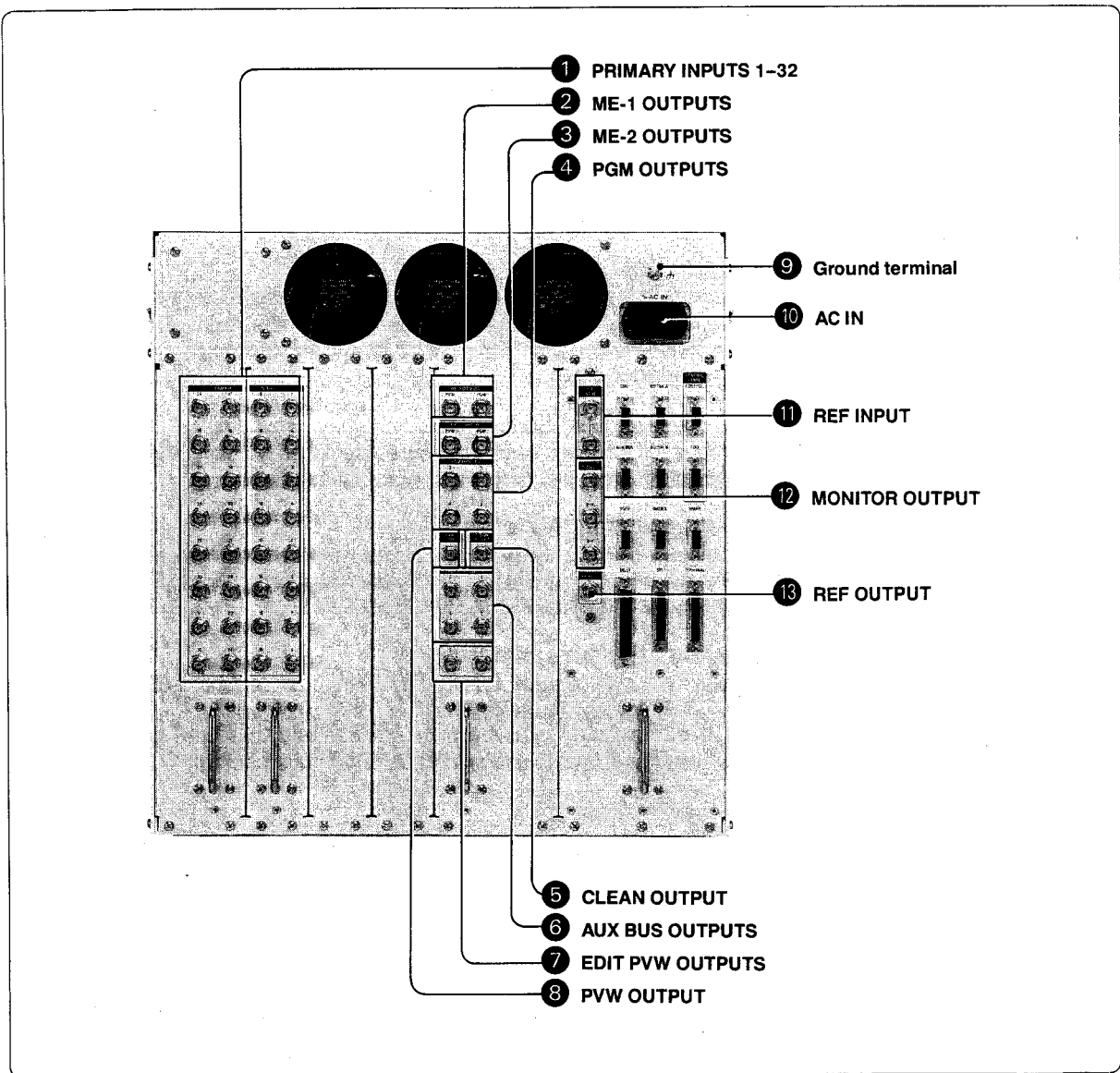
Connect this to the digital TP connector on one of the boards with a flexible cable, to input the digital signal. It will be converted and output as an analog signal from the D/A output connector 25.

28 TERMINAL connector

Connect this to the control terminal, to use for initial settings or for maintenance. It complies with the RS-232C standard, and is connected in parallel with the TERMINAL connector on the rear panel.

1-2-2. Rear Panel

Connectors



- 1 PRIMARY INPUTS 1–32 (BNC)**
These are connectors for the serial digital signals. Thirty-two channels are provided as standard.
- 2 ME-1 OUTPUTS (BNC)**
These connectors output the video currently being produced on the M/E-1 bank of the control panel as a serial digital video signal. Connect the PGM connector to a program monitor to view the currently produced video. Connect PVW to a preview monitor to check the picture which will be output from the PGM connector after the transition.
- 3 ME-2 OUTPUTS (BNC)**
These connectors output the video currently being produced on the M/E-2 bank of the control panel as a serial digital video signal. Again program and preview connectors are provided.
- 4 PGM (program) OUTPUTS (BNC)**
These connectors output the video currently being produced on the PGM/RST (program/preset) bank of the control panel as a serial digital video signal. There are four connectors, which are the final output from the switcher. Connect program monitors or video tape recorders as required.
- 5 CLEAN (clean feed) OUTPUT (BNC)**
This connector outputs the video currently being produced on the program/preset bank but not yet subject to the final processing by the downstream keyer.
- 6 AUX (auxiliary) BUS OUTPUTS 1–4 (BNC)**
The switcher has four auxiliary buses, for outputs to external devices such as effects processors. These four connectors output the signals selected on the corresponding buses. The signals are selected from the control panel.
- 7 EDIT PVW (preview) OUTPUTS 1–2 (BNC)**
These two connectors output the signal selected from the control panel as output on the preview bus. When controlling the switcher from an editor, for example, you can use this as a monitor output. The two connectors output the same signal. The same signal is also output as an analog signal from the MONITOR OUTPUT connector **10**.
- 8 PVW (preview) OUTPUT (BNC)**
This connector outputs the video which will be output from the PGM OUTPUTS connectors **4** after the effects transition on the PGM/PST bank of the control panel. Connected to a preview monitor it allows you to check the final video output.
- 9 Ground terminal**
Connect to system ground.
- 10 AC IN**
Connect to a 90 V to 264 V AC supply with the supplied power cord.

11 REF (reference video) INPUT (BNC)

These are loop-through connectors for the analog reference video signal input (sync signal), when using an external synchronizing signal with the switcher. Connect the input to either of the connectors, and the other serves as a loop-through output. If not using the loop-through output, always connect the 75 ohm terminator (supplied as an accessory) to the other connector.

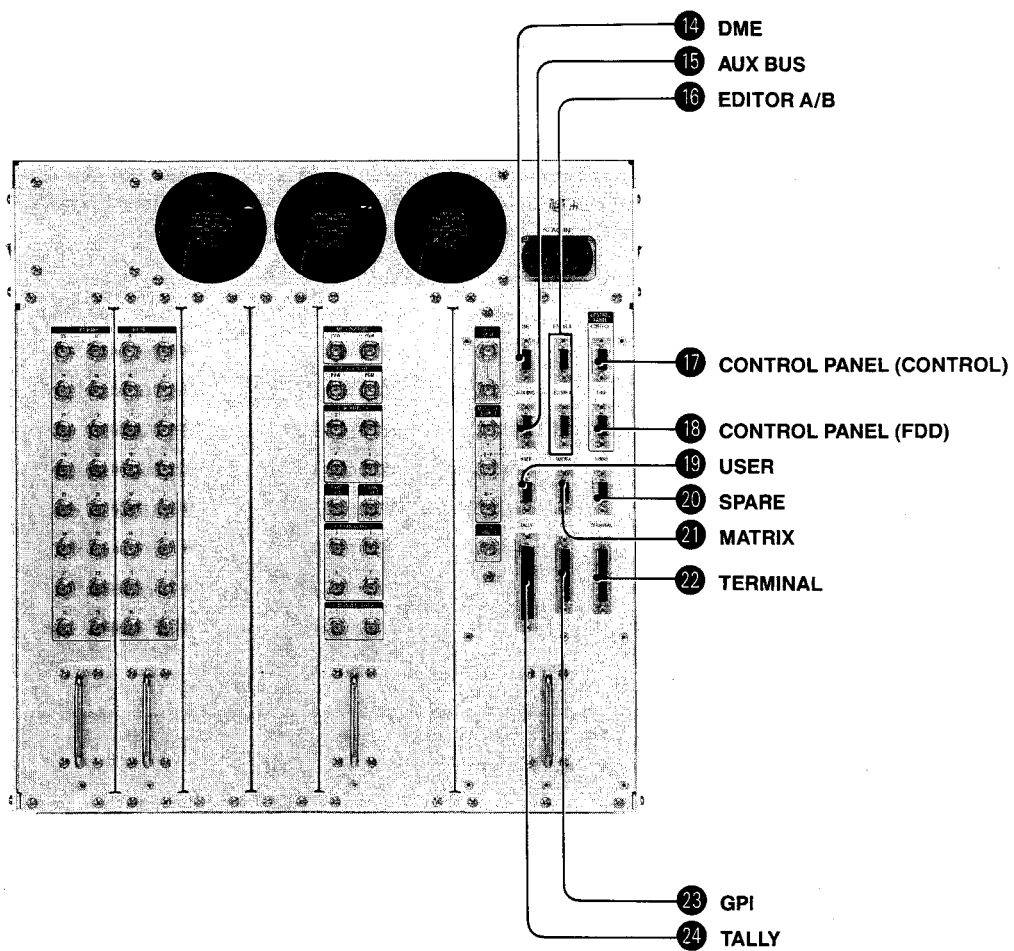
12 MONITOR OUTPUT (BNC)

This connector provides an analog signal from the preview bus, which is otherwise the same as the signal from the EDIT PVW OUTPUTS connectors **7**.

13 REF (reference video) OUTPUT (BNC)

This connector outputs an analog reference video signal (sync signal). The phase of this reference signal with respect to the reference signal input to the REF INPUT connector **11** can be adjusted within a range of ± 1 H from the control panel.

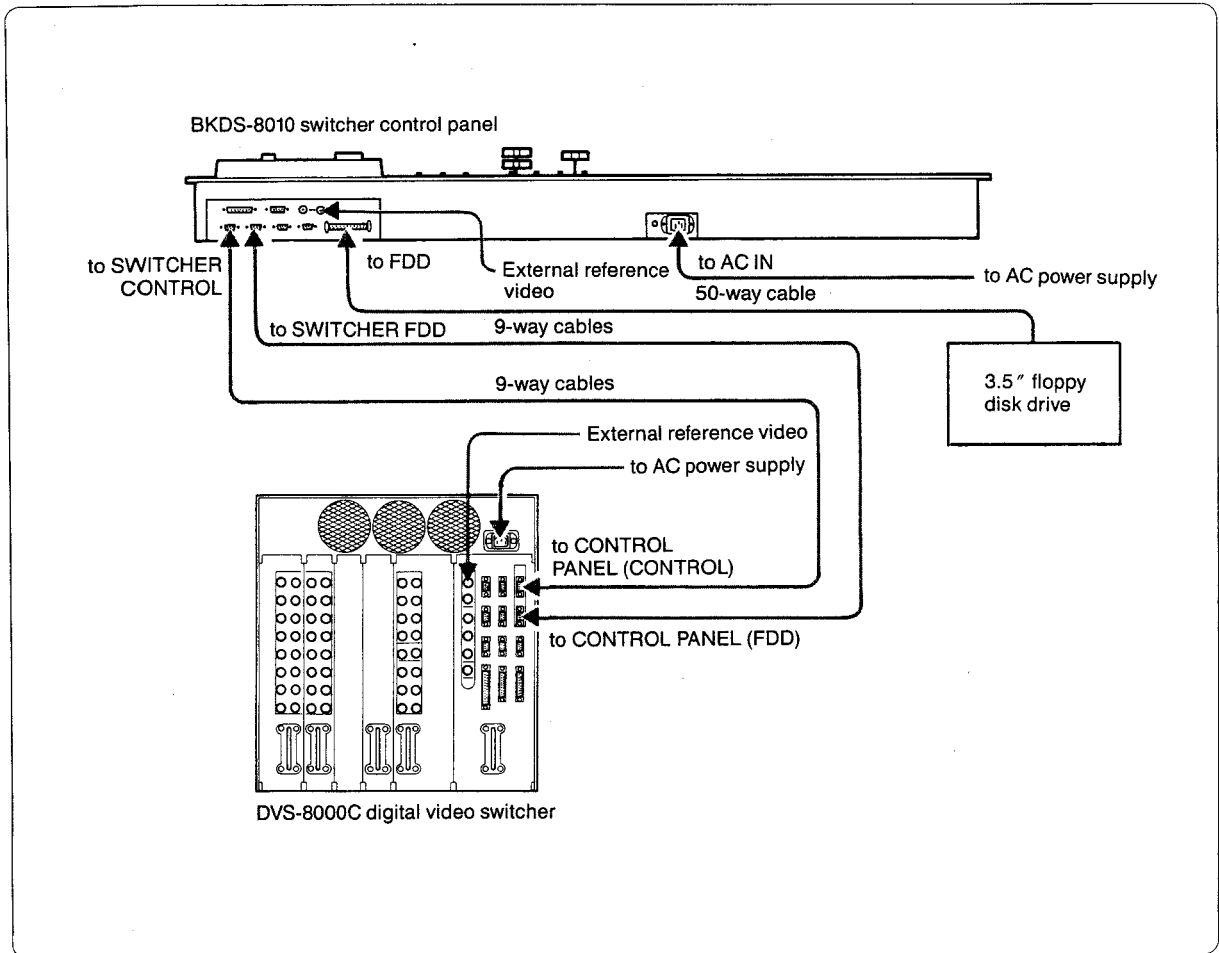
Interface connectors



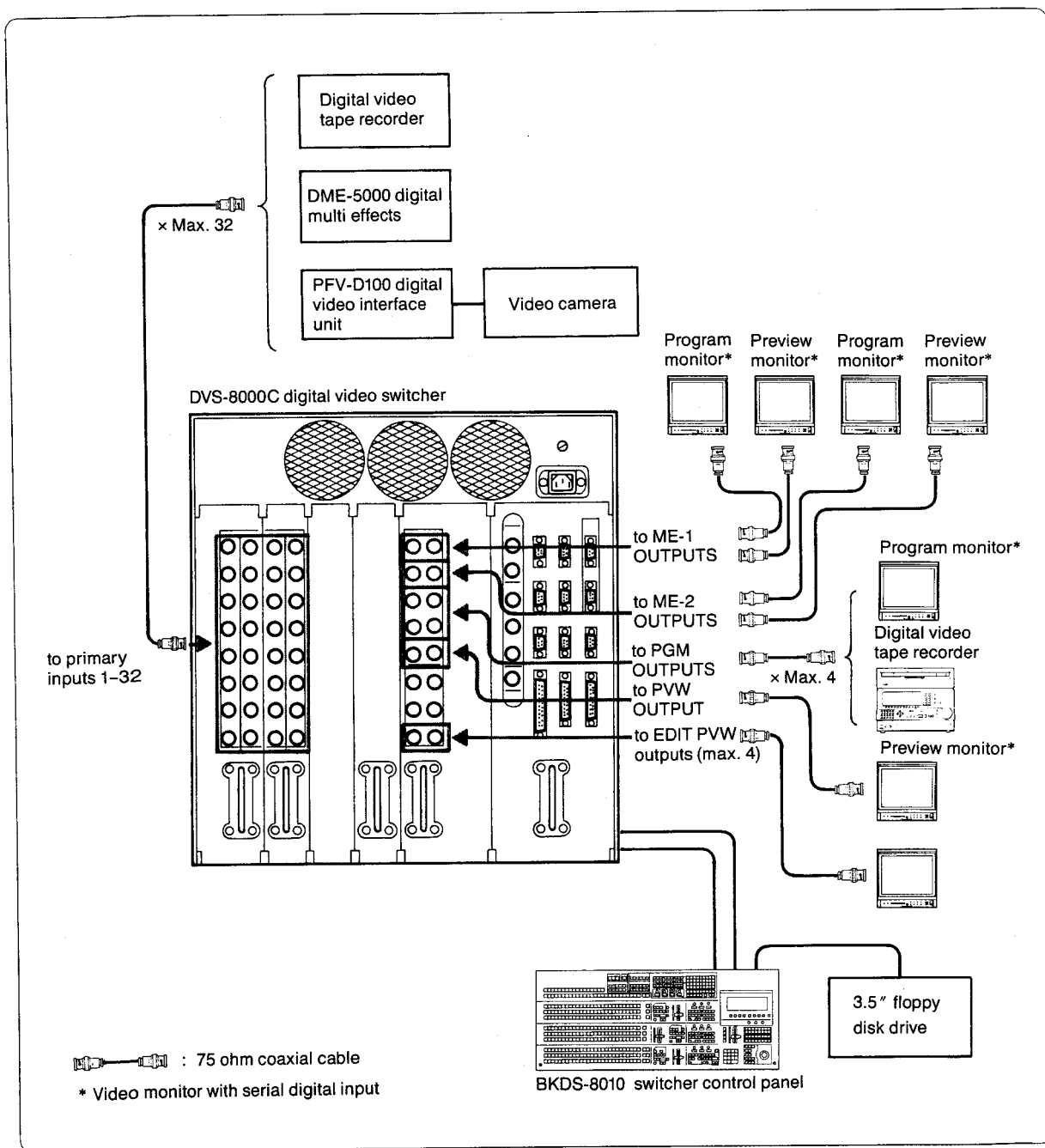
- 14 **DME (digital multi effects) (D-SUB 9-pin)**
Connect to the DME-5000. It complies with RS-422A.
- 15 **AUX (auxiliary) BUS (D-SUB 9-pin)**
Connect to a second DME-5000 unit for control of the four auxiliary buses (AUX 1-4) built-in to the switcher. It complies with RS-422A.
- 16 **EDITOR A/B (D-SUB 9-pin)**
Connect to external devices such as a BVE-9000 editing control system, so that the switcher can be controlled from an editor. EDITOR A is provided for normal use and EDITOR B for function expansion.
- 17 **CONTROL PANEL (CONTROL) (D-SUB 9-pin)**
This connector is for connection to a control panel such as a BKDS-8010. It allows the control panel to operate all the functions of the switcher, and complies with RS-422A.
- 18 **CONTROL PANEL (FDD) (floppy disk drive) (D-SUB 9-pin)**
Connected to a control panel such as a BKDS-8010, this gives the switcher access to the floppy disk drive connected to the control panel. It complies with RS-422A.
- 19 **USER (D-SUB 9-pin)**
This is for future system expansion. It complies with RS-422A.
- 20 **SPARE (D-SUB 9-pin)**
This RS-422A connector is a spare control connector, only used in the factory.
- 21 **MATRIX (D-SUB 9-pin)**
This is for connection to an external matrix switcher. It complies with RS-422A.
- 22 **TERMINAL (D-SUB 25-pin)**
This is for connection to a control terminal, complying with RS-232C. It is used for initialization and maintenance of the switcher, and is connected in parallel with the TERMINAL connector on the SG-189 board installed in the switcher.
- 23 **GPI (general purpose I/O) (D-SUB 25-pin)**
Connected to an external device, this connector allows trigger signals to be input and output. There are 8 inputs and 7 outputs, and control of the I/O conditions for these is programmable.
- 24 **TALLY (D-SUB 50-pin)**
This outputs tally signals showing which signals are currently selected, including the state of all 32 primary inputs, internal chroma key inputs 1 and 2, and M/E-1 and M/E-2 banks.

1-3. System Configuration Examples

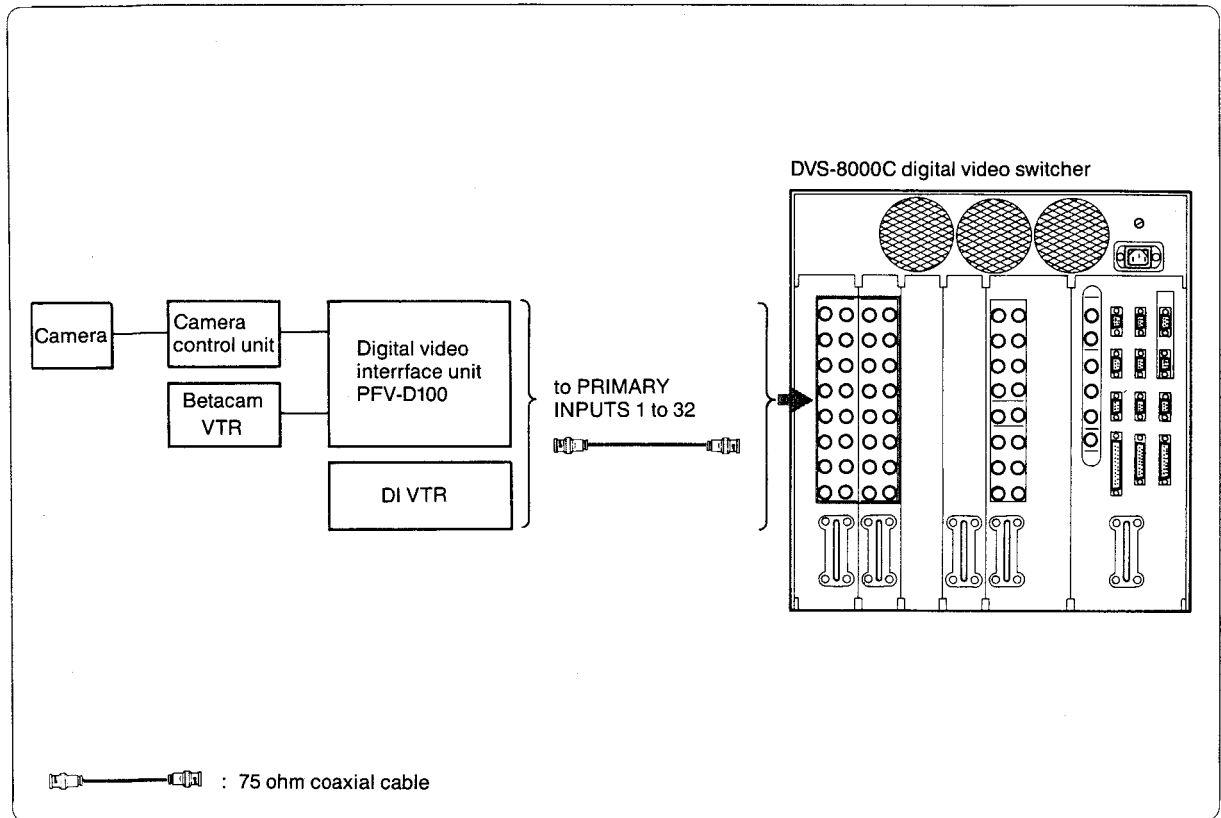
1-3-1. Control Panel Connections



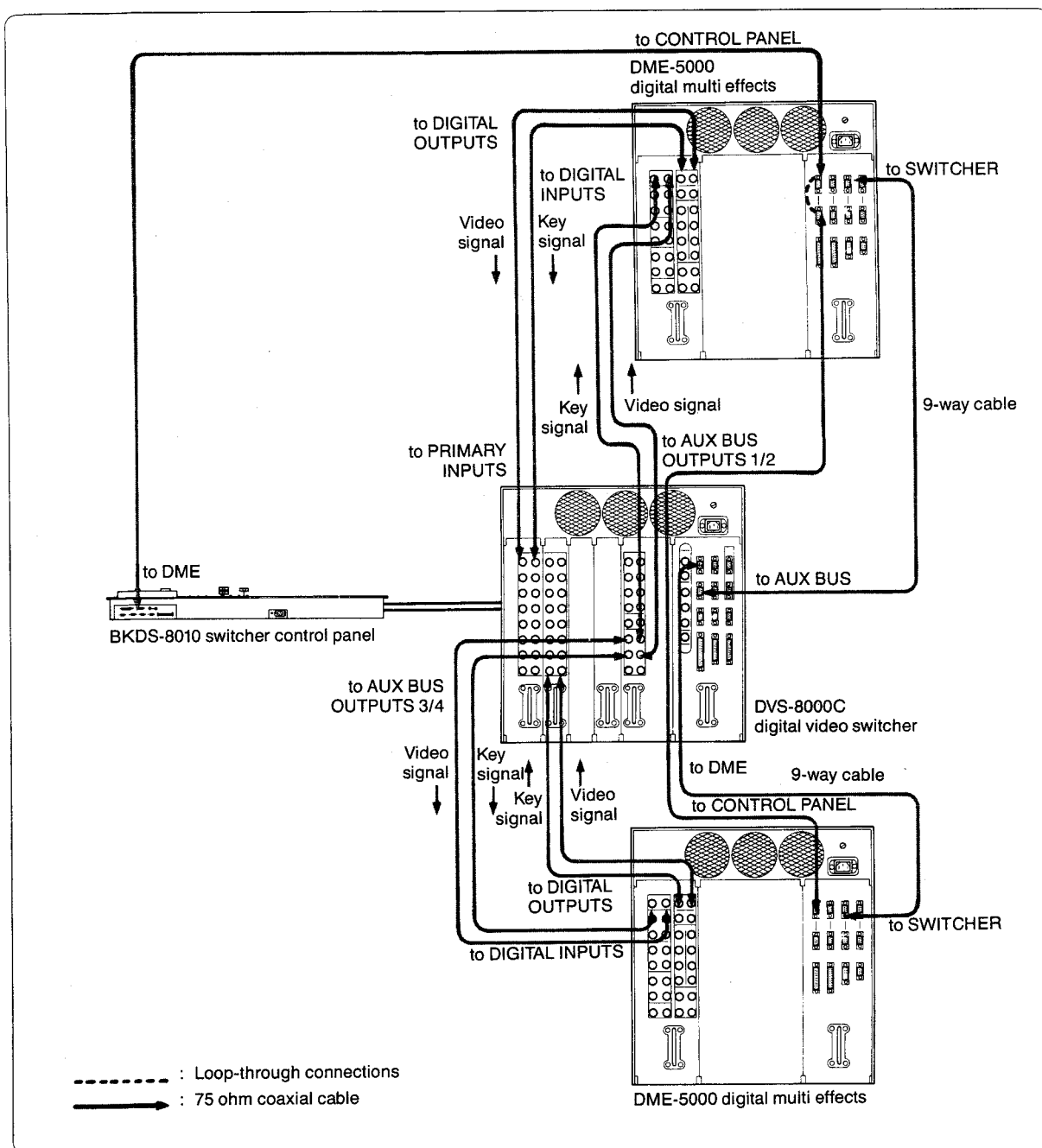
1-3-2. Primary Input and Video Monitor Connections



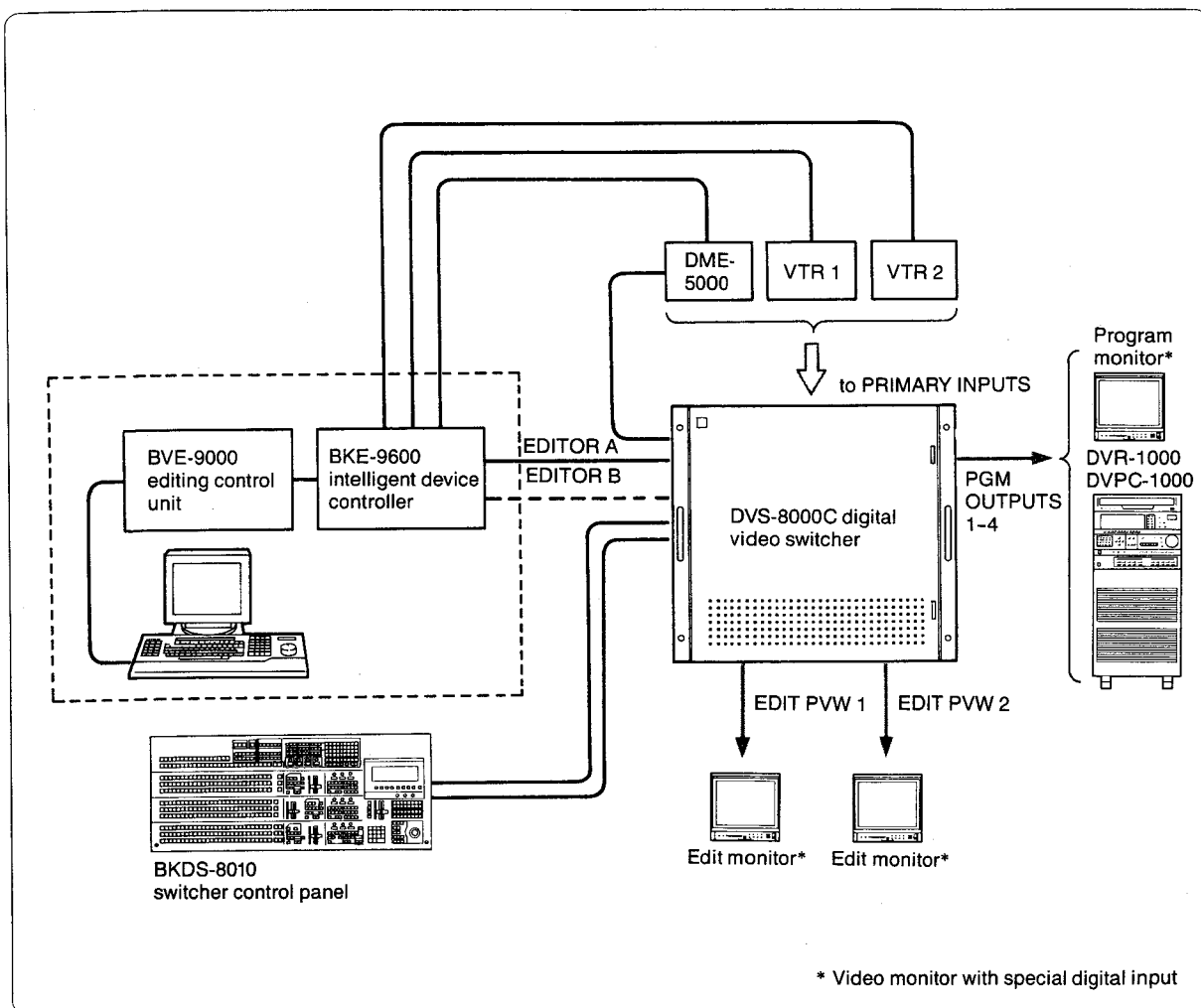
1-3-3. External Chroma Key Source Connections



1-3-4. DME-5000 Digital Multi Effects Connections



1-3-5. BVE-9000 Editing Control System Connections



1-4. Principal Specifications

General

Power supply	90 to 264 V AC, 50/60 Hz
Power consumption	Maximum 300 W
Temperature range	Operating: 5 to 40°C (41 to 104°F) Performance guaranteed: 10 to 35°C (50 to 95°F)
Dimensions (w/h/d, excluding projections)	Approx. 424 × 443 × 450 mm (16¾ × 17½ × 17¾ inches)
Weight	Approx. 50 kg (110 lb 4 oz)

Input/output connectors

PRIMARY INPUTS	Serial digital video signal inputs, BNC (× 32) Level: 800 mV ± 10%, 75 ohm Return loss: 15 dB (5 to 270 MHz)
MONITOR OUT	Analog video signal output (Y, B-Y, R-Y), BNC (× 3) Video bandwidth: flat to 5.0 MHz ± 0.5 dB (Y) flat to 2.0 MHz ± 0.5 dB (B-Y, R-Y)
REF INPUT	Analog sync signal input, BNC (× 2), loop-through Level: 0.2 to 5 V
REF OUTPUT	Analog sync signal output, BNC (× 1) Level: sync: 2 V ± 20 mV Phase adjustment: ± 1 H System phase adjustment: + 0.5 H to 1.0 H
ME-1 OUTPUT PGM/PVW	Serial digital video signal outputs, BNC (× 2), 75 ohm Level: 800 mV ± 10% Transmission rate: 270 Mbps
ME-2 OUTPUT PGM/PVW	Serial digital video signal outputs, BNC (× 2), 75 ohm Level: 800 mV ± 10% Transmission rate: 270 Mbps
PGM OUTPUTS	Serial digital video signal outputs, BNC (× 4), 75 ohm Level: 800 mV ± 10% Transmission rate: 270 Mbps
PVW OUTPUT	Serial digital video signal output, BNC (× 1), 75 ohm Level: 800 mV ± 10% Transmission rate: 270 Mbps
CLEAN OUTPUT	Serial digital video signal output, BNC (× 1), 75 ohm Level: 800 mV ± 10% Transmission rate: 270 Mbps
AUX BUS OUTPUTS	Serial digital video signal outputs, BNC (× 4), 75 ohm Level: 800 mV ± 10% Transmission rate: 270 Mbps
EDIT PVW OUTPUT 1/2	Serial digital video signal outputs, BNC (× 2), 75 ohm Level: 800 mV ± 10% Transmission rate: 270 Mbps
AC IN	AC power supply, 3-pin AC connector (× 1)

Remote control signals

CONTROL PANEL (CONTROL)

Complies with RS-422A, D-SUB 9-pin

CONTROL PANEL (FDD)

Complies with RS-422A, D-SUB 9-pin

EDITOR A

Complies with RS-422A, D-SUB 9-pin

EDITOR B

Complies with RS-422A, D-SUB 9-pin

DME

Complies with RS-422A, D-SUB 9-pin

AUX BUS

Complies with RS-422A, D-SUB 9-pin

MATRIX

Complies with RS-422A, D-SUB 9-pin

USER

Complies with RS-422A, D-SUB 9-pin

TERMINAL

Complies with RS-232C, D-SUB 25-pin

GPI

TTL inputs × 8

Relay contact outputs (max. 30 V AC/DC, 0.1 A*) × 7

D-SUB 25-pin

TALLY

Relay contact outputs (max. 30 V AC/DC, 0.1 A*) × 7

D-SUB 50-pin

* For resistive load

Standard accessories

Rack mounting angles (fitted to the switcher) (1 set)

Expansion board (EX-209) (1)

Power cord (3)

Adaptor (2-pin) for power cord (1)

75 ohm terminator (1)

Operation and maintenance manual (1)

Accessories supplied separately

BKDS-8010 switcher control panel

BKDS-8031 clean chroma key board

BKDS-8041 frame memory board

BKDS-8090 spare power supply unit

Related equipment

DME-5000/9000 digital multi effects

BKDM-5070 control panel for DME-5000

BKDM-9010 controller system for DME-9000

BVE-9000 editing control system

Design and specifications are subject to change without notice.

Manuels pour le système de commutateur vidéo numérique DVS-8000C

Le commutateur vidéo numérique DVS-8000C est le composant de traitement de l'ensemble d'un système de commutation DVS-8000C quand il est utilisé avec un panneau de contrôle de commutateur BKDS-8010.

Les manuels suivants accompagnent ces deux produits.

Mode d'emploi et d'entretien du DVS-8000C

(Ce manuel, fourni avec le commutateur.)

La Section 1 "EXPLOITATION" donne un aperçu du système du DVS-8000C, explique les organes et commandes du commutateur, et donne des exemples de configuration. Le personnel responsable de la gestion de l'ensemble du système de commutateur vidéo doit lire cette section d'abord.

La Section 2 et les sections suivantes couvrent l'installation du système et son entretien. Les consulter pour la maintenance périodique et également pour rechercher les erreurs en cas de défaillance.

Guide de l'utilisateur du DVS-8000/8000C

(Fourni avec le panneau de contrôle.)

Il décrit les organes et commandes du panneau de contrôle et explique comment utiliser le système DVS-8000C—le garder à proximité comme référence.

Il est à noter qu'il couvre également l'emploi du système avec un générateur d'effets numériques multiples DME-5000, quand un tel appareil est connecté.

Manuel d'entretien du BKDS-8010

(Fourni avec le panneau de contrôle.)

Décrit l'aspect matériel du panneau de contrôle; il est requis pour l'installation et l'entretien.

Section 1 EXPLOITATION

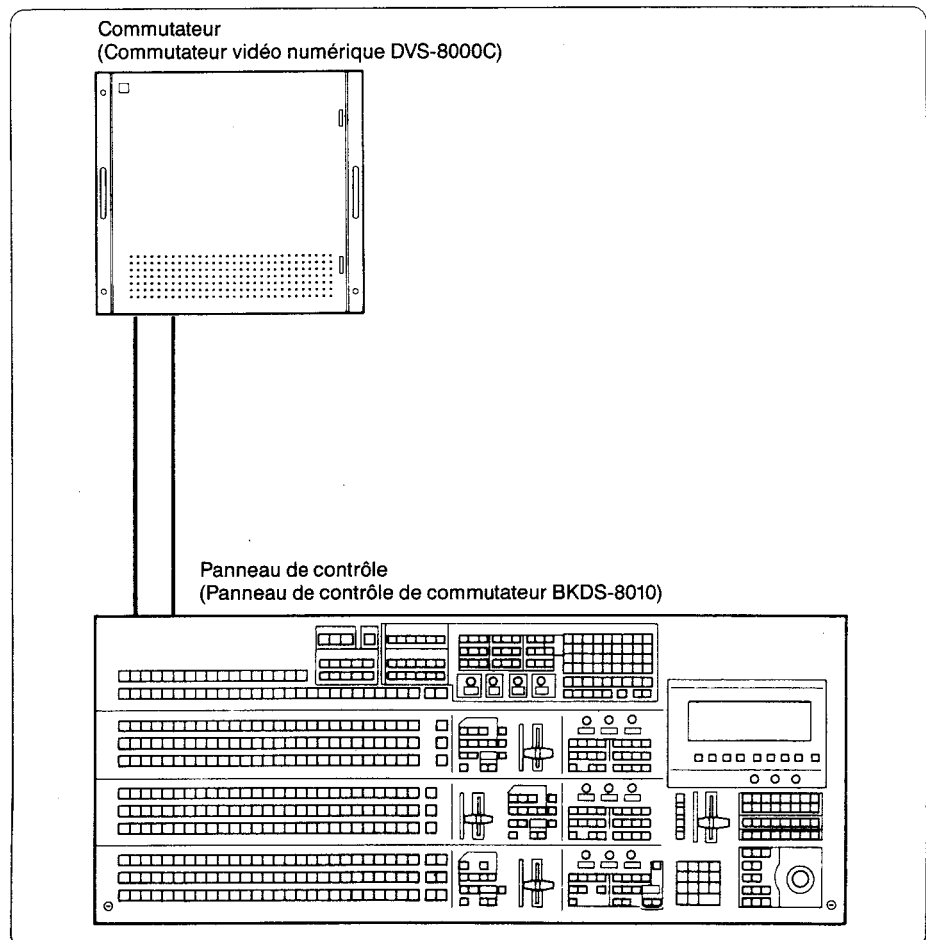
1-1. Aperçu

Le commutateur vidéo numérique DVS-8000C est un commutateur de haute performance prévu pour le format D1, et destiné aux studios de diffusion et aux systèmes de post-production. Il s'opère normalement depuis un panneau de contrôle BKDS-8010 (en vente séparée.)

Noter que la section 1 de ce manuel utilise les termes suivants pour les composants du système:

Commutateur: Commutateur vidéo numérique DVS-8000C

Panneau de contrôle: Panneau de contrôle de commutateur BKDS-8010



1-1-1. Caractéristiques principales

Haute qualité d'image et haute stabilité assurées par le traitement entièrement numérique

Tout le traitement interne des signaux d'entrée numériques série de sources vidéo, d'un magnétoscope de format D1, par exemple, est numérique, et les signaux traités sont sortis sans conversion, sous forme de signaux numériques série. La longueur de mot traitée est de 10 bits aux interfaces d'E/S et 14 bits maximum à l'intérieur, ce qui réduit la dégradation caractéristique des signaux vidéo. Ceci permet la pleine exploitation du premier avantage du traitement numérique sur le traitement analogique—une qualité d'image sensiblement supérieure—pour produire des effets vidéo de très haut niveau. L'unité d'entrée étant pourvue d'une mémoire bloc-notes, la correction de phase est automatique à $\pm 0,5$ H par rapport au signal de référence, et le signal entré pourra être stabilisé même s'il comporte un certain sautillerment.

Format numérique série pour toutes les E/S

Toutes les E/S numériques sont traitées en format série, ce qui permet leur transmission par un seul câble coaxial de 75 ohms. Les connexions sont beaucoup plus simples à réaliser que dans un système de transmission en parallèle conventionnel, et la complexité globale du système est réduite. Par ailleurs, la distance de transmission peut être largement allongée sans dégradation sensible.

Canaux multiples d'entrée primaire

Le commutateur est pourvu de 32 canaux standard d'entrée primaire numérique. Une unité d'interface vidéo numérique PFV-D100 en option dotée d'une carte de convertisseur A/N BKPF-101C et/ou d'une carte de convertisseur N/A BKPF-102C en option est disponible pour l'interface avec les systèmes analogiques existants. Tout signal entré peut être utilisé comme fond, remplissage d'incrustation ou source d'incrustation.

Exploitation avec le DME-5000

Si le générateur d'effets numériques multiples DME-5000 est connecté, le commutateur et le DME-5000 pourront être contrôlés depuis le même panneau de contrôle. Ce type d'exploitation combinée appelée DME LINK® permet des opérations puissantes, telles que des effets de fondu effacé DME, combinant des effets au fond effacé du commutateur. Le panneau de contrôle permet le contrôle interactif du commutateur et du DME-5000 via un système de menu.

Gamme importante de plaquettes optionnelles

De nombreuses plaquettes sont disponibles, telles que plaquette d'entrée de signal composant analogique, incrustateur de chroma et mémoire de cadres. Chacune de ces fonctions est utilisable simplement en installant une plaquette spéciale.

Interfaces extérieures

Le commutateur peut être interfacé avec un système de montage de haut niveau, tel qu'un système de contrôle de montage BVE-9000, permettant le stockage des données du panneau de contrôle, et fournissant une fonction de simulation pour les opérations de cadre clé. Par ailleurs, d'autres appareils, tels que commutateurs matriciels, terminaux de contrôle, dispositifs de signalisation ou unité d'interface vidéo numérique PFV-D100, peuvent être raccordés en cas de besoin.

Architecture à LSI

La haute fonctionnalité du commutateur est réalisée par les LSI, assurant compacité et faible consommation d'énergie.

Maintenance simple

En cas de défaillance, les principaux composants de l'appareil, l'alimentation, les plaquettes et le moteur du ventilateur y compris, peuvent être remplacés par l'avant pour réduire le temps d'arrêt. Le nombre des résistances variables et des sélecteurs des plaquettes a été réduit au minimum, en recourant autant que possible des instructions logicielles. L'alimentation de réserve BKDS-8090 en option réduira encore le temps d'arrêt dû à une panne d'alimentation.

Grande fonctionnalité du commutateur

Le panneau de contrôle dispose de deux blocs M/E, capables chacune de contrôler deux incrustateurs séparés, et un bloc PGM/PST pouvant contrôler un incrustateur séparé. Ces incrustateurs sont pourvus d'une gamme importante de fonctions de modification, permettant la construction graduelle des effets vidéo. Un lecteur de disquette 3,5", accessoire standard du panneau de contrôle, permet le stockage des effets ainsi réalisés et leur répétition ultérieure. Voir le guide de l'utilisateur fourni pour de plus amples informations sur le panneau de contrôle.

1-1-2. Remarques importantes

Réglage du sélecteur de mode

Avant d'utiliser ce commutateur, régler le sélecteur de mode selon le mode d'exploitation (525/625). Voir la page 1-10 (F) pour la position du sélecteur.

Insertion et retrait des plaquettes de circuits imprimés

Ne retirer les plaquettes que si c'est absolument nécessaire. Suivre les indications ci-dessous lors de l'insertion ou du retrait d'une plaquette optionnelle ou du retrait d'une plaquette au moment de la maintenance.

- Vérifier que le commutateur est hors tension avant l'insertion ou le retrait de toute plaquette. Voir la page 1-6(F) pour l'emplacement de l'interrupteur d'alimentation.
- Avant la remise sous tension après l'insertion de la plaquette, vérifier que le numéro du logement figurant sur le coffret du commutateur correspond à celui indiqué sur la plaquette.

Voir 2-5-2 "Installation Card Boards" (Installation des plaquettes optionnelles) pour de plus amples détails.

La non observation de ces précautions peut endommager les circuits.

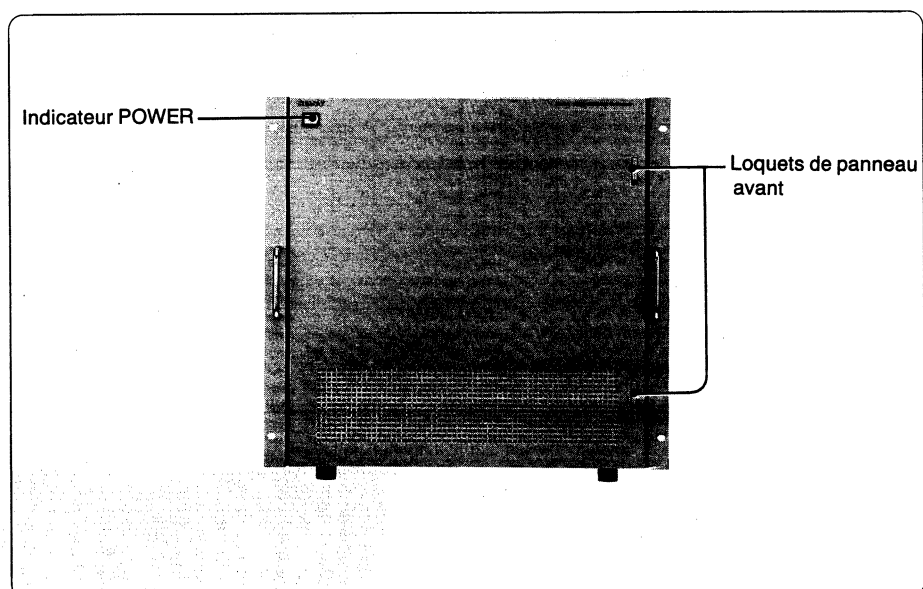
Disjoncteur

Le disjoncteur coupe automatiquement l'alimentation en cas de surintensité. Si le courant n'est pas remis en activant l'interrupteur POWER (ON), ouvrir le panneau avant et appuyer sur le bouton de disjoncteur blanc. Voir la page 1-6(F) pour l'emplacement du bouton de disjoncteur.

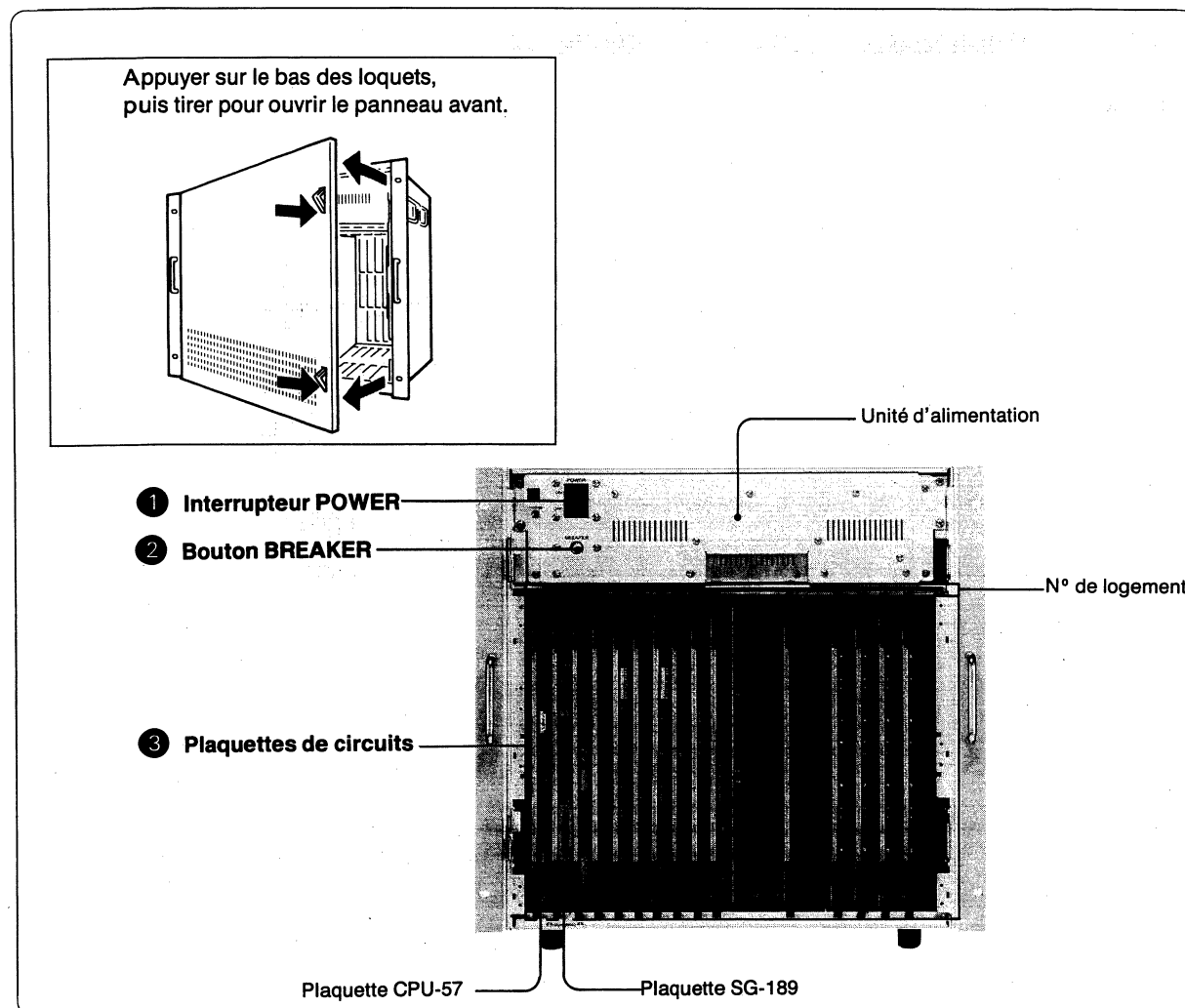
1-2. Localisation et fonction des organes et commandes

1-2-1. Panneau avant et intérieur

Panneau avant



Intérieur



1 Interrupteur d'alimentation (POWER)

Met le commutateur sous/hors tension.

2 Bouton de disjoncteur (BREAKER)

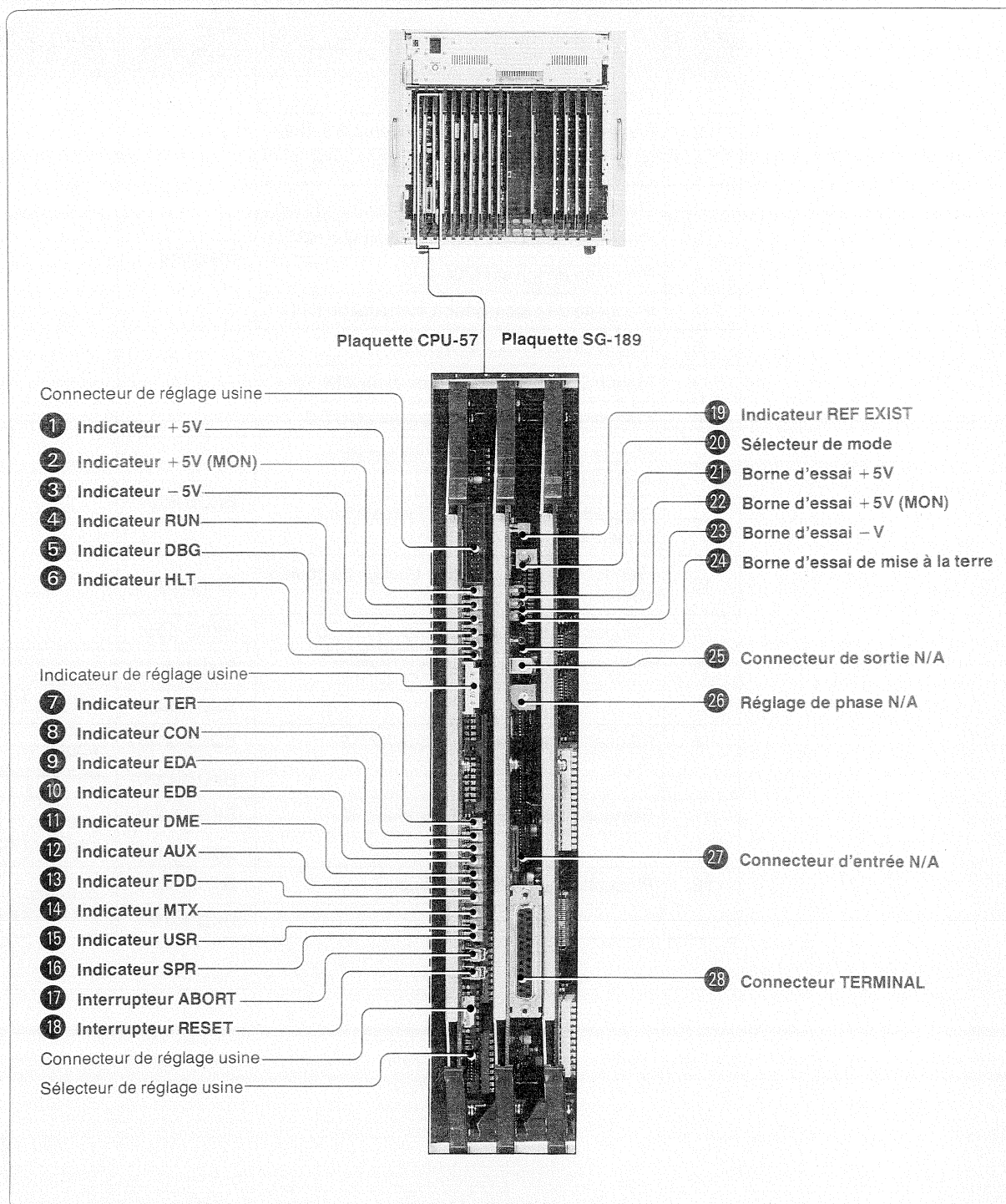
Si le disjoncteur incorporé se déclenche à cause d'une surintensité, l'alimentation sera coupée et ce bouton saillira.

3 Plaquettes de circuits

Les plaquettes dans les 18 logements sont les suivantes. Les logements pour les plaquettes optionnelles sont marqués d'un astérisque.

Logement n°	Nom de la plaquette	Fournie comme	Remarques
1	Plaquette CPU CPU-57 Standard	Standard	
2	Plaquette de générateur de synchro SG-189		
3	Plaquette de fondu effacé amélioré WKG-5		
4	Plaquette de fondu effacé fondamental WKG-4		
5	Plaquette de processeur d'incrustation KPC-1		
6	Plaquette de mixeur MIX-4 (A)		
7	Plaquette de processeur d'incrustation KPC-1		
8	Plaquette de mixeur MIX-4 (A)		
9	Plaquette DSK (incrustateur en aval) MIX-6 (A)		
10	Plaquette de processeur de sortie OUT-2		
11*	Plaquette de processeur d'incrustation-couleur CRK-4	BKDS-8031	
12*	Plaquette de processeur d'incrustation-couleur CRK-4		
13	Plaquette de générateur de trucage de couleur MAT-2	Standard	
14*	Plaquette de mémoire de cadres MY-50	BKDS-8041	
15	Plaquette d'entrée numérique XPT-2	Standard	pour les canaux 1-8
		BKDS-8021	
16	Plaquette d'entrée numérique XPT-2	BKDS-8020	pour les canaux 9-16
		BKDS-8020	
17	Plaquette d'entrée numérique XPT-2	BKDS-8020	pour les canaux 17-24
		BKDS-8021	
18	Plaquette d'entrée numérique	BKDS-8020	pour les canaux 25-32
		BKDS-8021	

Les plaquettes CPU-57 et SG-189 sont pourvues d'indicateurs montrant l'état d'exploitation du commutateur et d'organes de réglage et d'essai, placés sur la face faisant face au panneau avant. Ces organes sont décrits ci-dessous.



- ➊ **Indicateur +5V (vert)**
Est allumé quand la puissance +5V est normalement fournie aux logements 1 à 9.
S'éteint quand le fusible F1 de la plaquette CPU-57 saute, ou en cas de panne d'alimentation.
- ➋ **Indicateur +5V (MON) (vert)**
Est allumé quand la puissance +5V est normalement fournie aux logements 10 à 18.
S'éteint quand l'alimentation +5V est défectueuse.
- ➌ **Indicateur -5V (vert)**
Est allumé quand l'alimentation -5V de tout le système est fournie normalement. S'éteint quand le fusible de la plaquette CPU-57 saute, ou que l'alimentation +5V est défectueuse.
- ➍ **Indicateur de fonctionnement (RUN) (vert)**
Est allumé quand le CPU fonctionne normalement et éteint quand le CPU est à l'arrêt.
- ➎ **Indicateur de mise au point (DBG) (vert)**
Sert uniquement aux ajustements en usine.
- ➏ **Indicateur de halte (HLT) (rouge)**
Est allumé quand le CPU est à l'arrêt.
- ➐ vers ➔ **Indicateurs d'état de communication (verts)**
Indiquent l'état des connecteurs du panneau arrière. Chacun s'arrête par intermittence à l'entrée de donnée à la ligne correspondante. Le tableau suivant indique la correspondance entre les indicateurs et connecteurs.

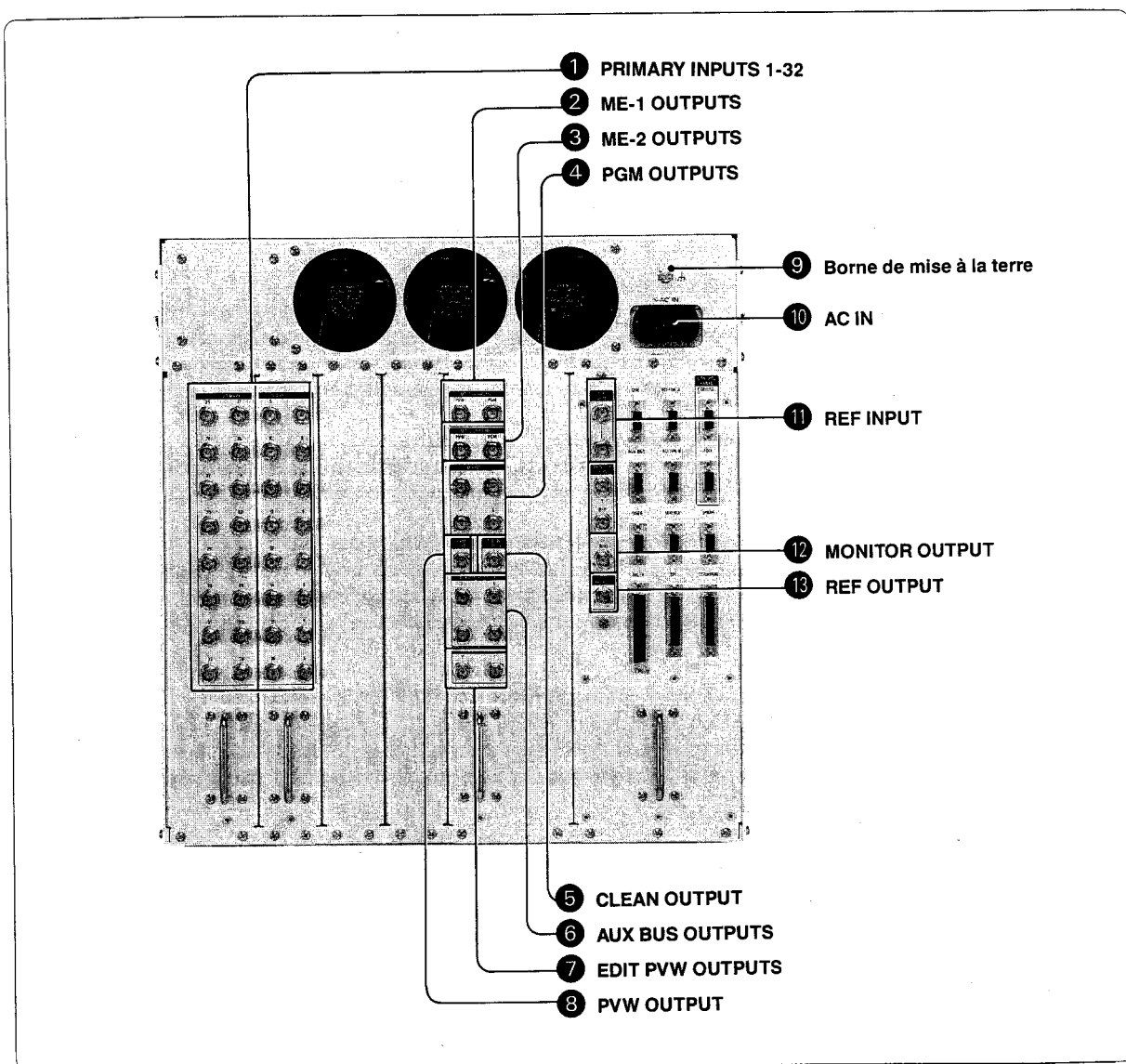
N°	Indicateur	Connecteur
7	TER	TERMINAL
8	CON	CONTROL PANEL (CONTROL)
9	EDA	EDITOR A
10	EDB	EDITOR B
11	DME	DME
12	AUX	AUX BUS
13	FDD	CONTROL PANEL (FDD)
14	MTX	MATRIX
15	USR	USER
16	SPR	SPARE

- ➑ **Interrupteur d'abandon (ABORT)**
Sert uniquement à l'ajustement en usine.
- ➒ **Interrupteur de remise à zéro (RESET)**
Ré-initialise le système.
- ➓ **Indicateur d'existence de référence (REF EXIST) (vert)**
Est allumé à l'entrée d'un signal de synchronisation (ou l'équivalent) au connecteur REF INPUT du panneau arrière.

- 20 Sélecteur de mode**
Sert à régler le mode d'exploitation du système au mode 525 lignes ou 625 lignes.
- 21 Borne d'essai + 5V (rouge)**
Sert à contrôler l'alimentation +5V aux logements 1 à 9. L'ajustement de la puissance fournie peut être nécessaire à l'installation du commutateur, ou à l'addition de plaquettes optionnelles.
- 22 Borne d'essai + 5V (MON) (rouge)**
Sert à contrôler l'alimentation +5V aux logements 10 à 18. L'ajustement de la puissance fournie peut être nécessaire à l'installation du commutateur, ou à l'addition de plaquettes optionnelles.
- 23 Borne d'essai - 5V (bleue)**
Sert à contrôler l'alimentation -5V de tout le système. L'ajustement de la puissance fournie peut être nécessaire à l'installation du commutateur, ou à l'addition de plaquettes optionnelles.
- 24 Borne d'essai de mise à la terre (noire)**
Il s'agit d'un connecteur de retour pour l'essai des bornes 21 à 23.
- 25 Connecteur de sortie N/A**
Le signal numérique entré au connecteur d'entrée N/A 27 est converti en signal analogique, et sorti à ce connecteur. Sert à l'ajustement des circuits.
- 26 Réglage de phase N/A**
Ajuste la phase de l'horloge de conversion N/A du signal entré au connecteur d'entrée N/A 27.
- 27 Connecteur d'entrée N/A**
Le raccorder au connecteur numérique TP de l'une des plaquettes avec un câble souple pour entrer le signal numérique, qui sera converti et sorti sous forme de signal analogique au connecteur de sortie N/A 25.
- 28 Connecteur de terminal (TERMINAL)**
Le raccorder au terminal de contrôle pour le réglage initial ou la maintenance. De norme RS-232C, il se connecte en parallèle au connecteur TERMINAL du panneau arrière.

1-2-2. Panneau arrière

Connecteurs



- ① Entrées primaires 1-32 (PRIMARY INPUTS 1-32) (BNC)**
Connecteurs prévus pour les signaux numériques série. Trente-deux canaux standard.
- ② Sorties ME-1 (ME-1 OUTPUTS) (BNC)**
Ces connecteurs fournissent la vidéo en cours de production au bloc M/E-1 du panneau de contrôle sous forme de signal vidéo numérique série. Raccorder le moniteur PGM à un moniteur de programme pour visualiser la vidéo en cours de production. Raccorder PVW à un moniteur de prévisionnage pour contrôler l'image qui sera sortie au connecteur PGM après la transition.
- ③ Sorties ME-2 (ME-2 OUTPUTS) (BNC)**
Ces connecteurs fournissent la vidéo en cours de production au bloc M/E-2 du panneau de contrôle sous forme de signal vidéo numérique série. Des connecteurs de programme et de prévisionnage sont également fournis.
- ④ Sorties de programme (PGM OUTPUTS) (BNC)**
Ces connecteurs fournissent la vidéo en cours de production au bloc PGM/PST (programme/préréglage) du panneau de contrôle sous forme de signal vidéo numérique série. Quatre connecteurs qui constituent la sortie finale du commutateur. Connecter des moniteurs de programme ou des magnétoscopes selon les besoins.
- ⑤ Sortie non corrigée (CLEAN OUTPUT) (BNC)**
Ce connecteur fournit la vidéo en cours de production au bloc de programme/préréglage, mais pas encore soumise au traitement final par l'incrustateur en aval.
- ⑥ Sorties de bus auxiliaires 1-4 (AUX BUS OUTPUTS 1-4) (BNC)**
Le commutateur est pourvu de quatre bus auxiliaires, pour la sortie à des appareils extérieurs, tels que processeurs d'effets. Ces quatre connecteurs fournissent les signaux sélectionnés aux bus correspondants. Les signaux sont sélectionnés au panneau de contrôle.
- ⑦ Sorties de prévisionnage de montage 1-2 (EDIT PVW) (BNC)**
Ces deux connecteurs fournissent le signal de sortie du bus de prévisionnage sélectionné au panneau de contrôle. Quand le commutateur est contrôlé d'une unité de montage, par exemple, cette sortie peut servir de sortie de moniteur. Les deux connecteurs fournissent le même signal.
- ⑧ Sortie de prévisionnage (PVW OUTPUT) (BNC)**
Ce connecteur fournit la vidéo qui sera sortie aux connecteurs PGM OUTPUTS ④ après la transition d'effets au bloc PGM/PST du panneau de contrôle.
Connecté à un moniteur de prévisionnage, elle permet le contrôle de la sortie vidéo finale.
- ⑨ Borne de mise à la terre**
La connecter à la terre du système.
- ⑩ Alimentation secteur (AC IN)**
La connecter à une alimentation secteur 90 V à 264 V avec le cordon d'alimentation fourni.

11 Entrée de vidéo de référence (BNC)

Il s'agit de connecteurs en boucle pour l'entrée du signal vidéo de référence analogique (signal de synchro), quand un signal de synchronisation extérieure est utilisé avec le commutateur.

Connecter l'entrée à l'un des connecteurs, l'autre servant de sortie en boucle. Si la sortie en boucle n'est pas utilisée, ne pas oublier d'insérer la terminaison 75 ohms (accessoire fourni) sur l'autre connecteur.

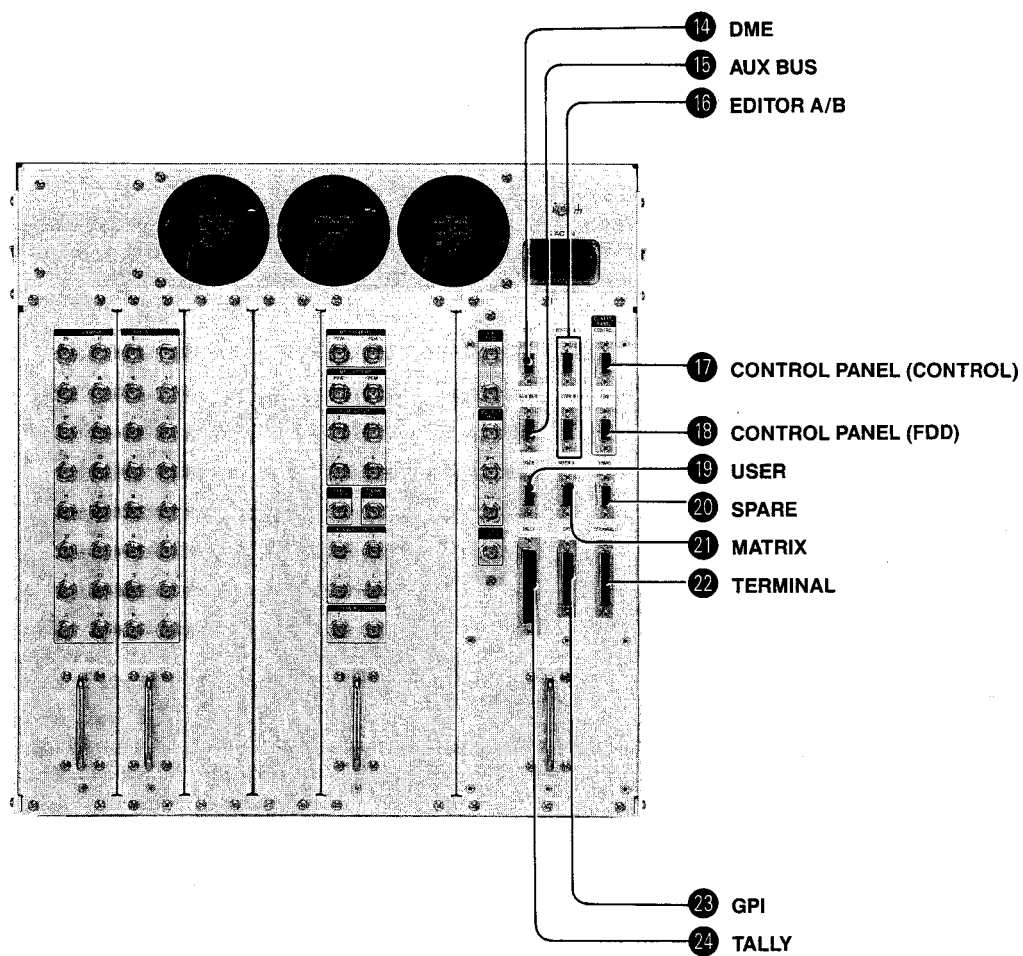
12 Sortie de moniteur (MONITOR OUTPUT) (BNC)

Ce connecteur fournit un signal analogique du bus de prévisionnage, qui est sinon le même que le signal des connecteurs EDIT PVW OUTPUTS 7.

13 Sortie de vidéo de référence (REF VIDEO) (BNC)

Ce connecteur fournit un signal vidéo de référence (signal de synchro). La phase de ce signal de référence par rapport du signal de référence entré au connecteur REF INPUT 11 peut être ajustée sur une plage de $\pm 1H$ au panneau de contrôle.

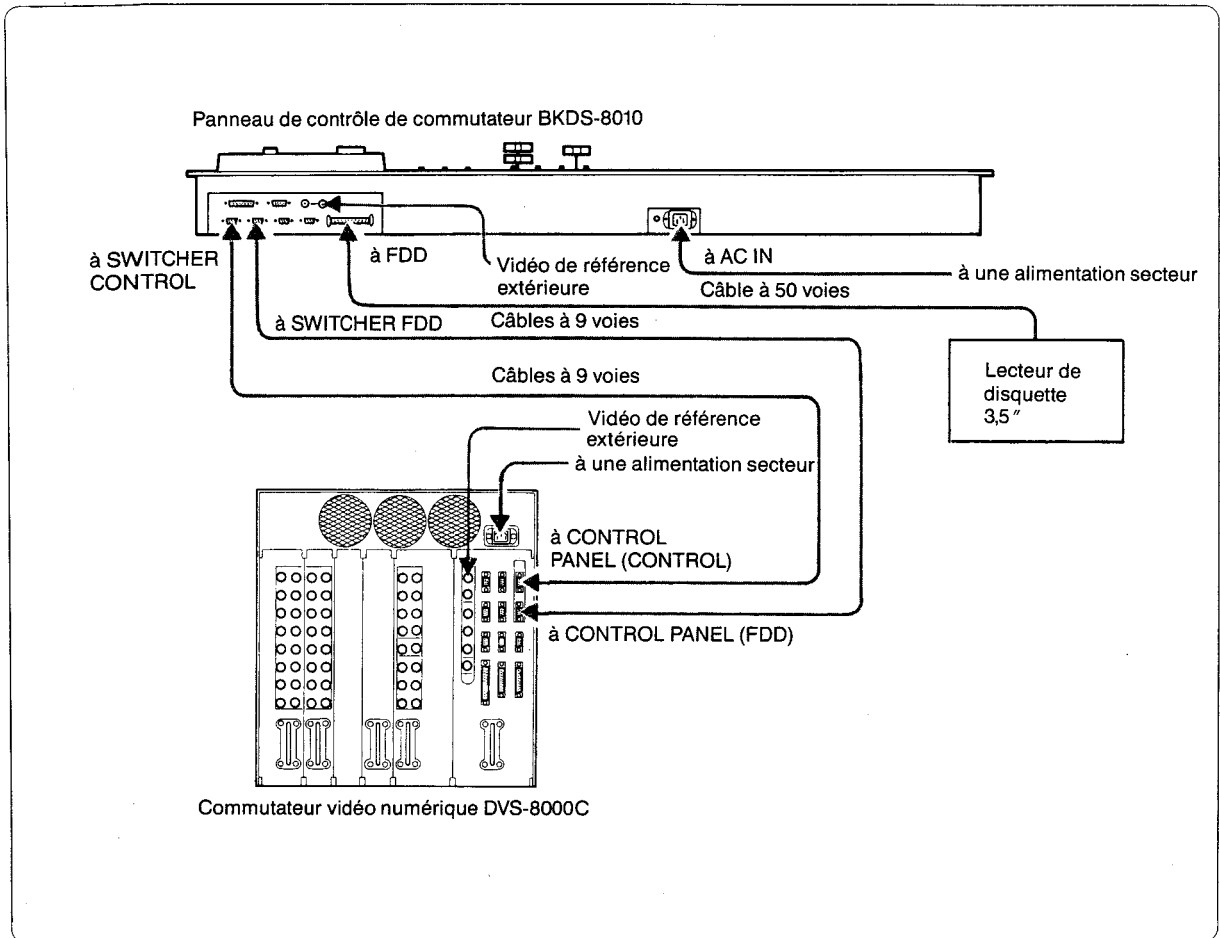
Connecteurs d'interface



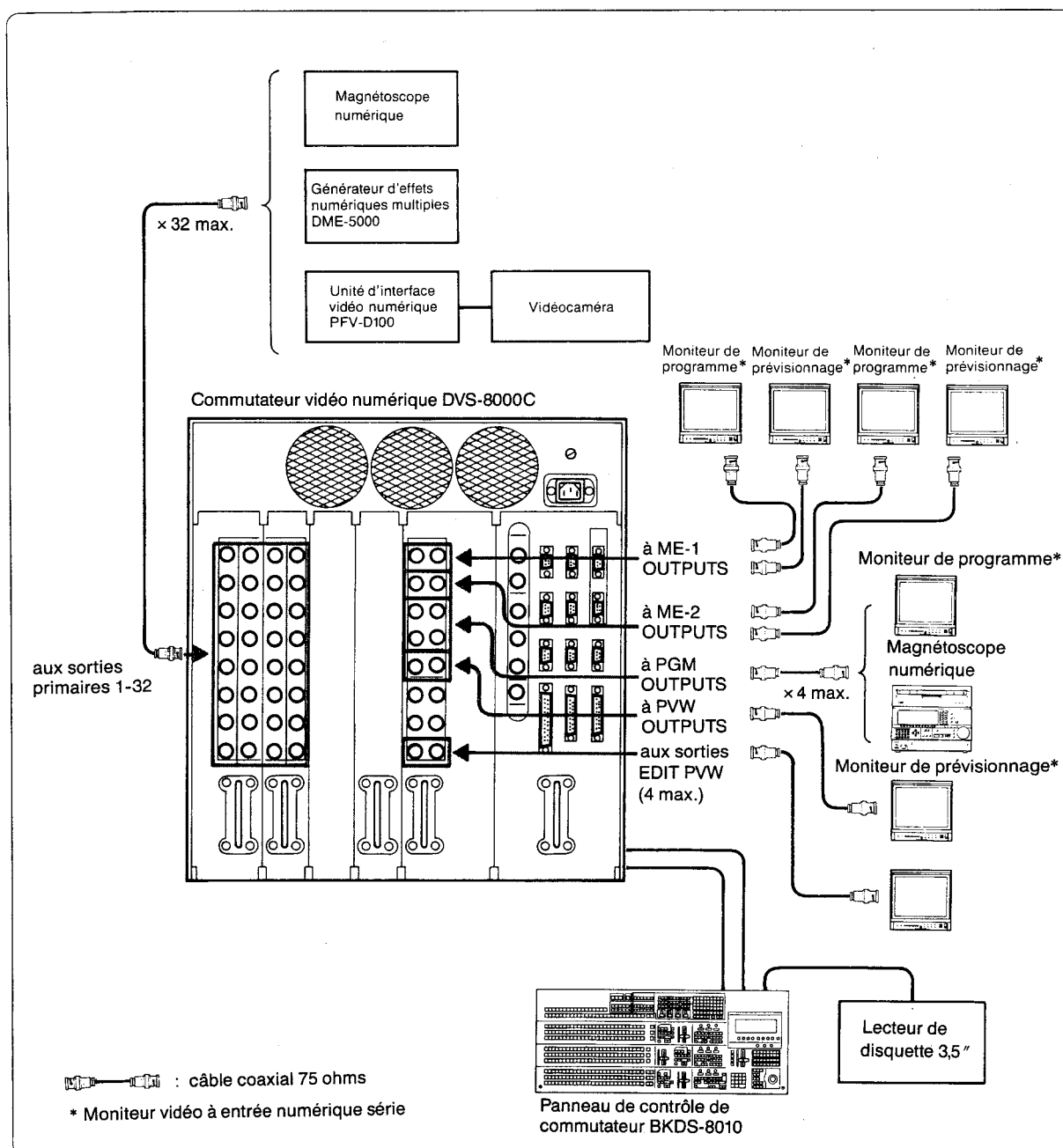
- 14 Générateur d'effets numériques multiples DME (DME) (D-SUB 9 broches)**
Le connecter au DME-5000. Norme RS-422A.
- 15 Bus auxiliaire (AUX BUS) (D-SUB 9 broches)**
Le connecter à un second de DME-5000 pour contrôler les quatre bus auxiliaires (AUX 1-4) incorporés au commutateur. Norme RS-422A.
- 16 Unité de montage A/B (EDITOR A/B) (D-SUB 9 broches)**
La connecter à un appareil extérieur, tel qu'un système de contrôle de montage BVE-9000, de sorte que le commutateur puisse être contrôlé d'une unité de montage.
EDITOR A est prévu pour l'exploitation normale et EDITOR B pour une extension des fonctions.
- 17 Panneau de contrôle (CONTROL PANEL) (CONTROL) (D-SUB 9 broches)**
Ce connecteur est prévu pour le raccordement à un panneau de contrôle, tel que BKDS-8010. De norme RS-422A, il permet le contrôle de toutes les fonctions du commutateur depuis le panneau de contrôle.
- 18 Lecteur de disquette du panneau de contrôle (CONTROL PANEL) (FDD) (D-SUB 9 broches)**
Raccordé à un panneau de contrôle, tel que BKDS-8010, il permet au connecteur d'accéder au lecteur de disquette raccordé au panneau de contrôle. Norme RS-422A.
- 19 Utilisateur (USER) (D-SUB 9 broches)**
Prévu pour une expansion future du système. Norme RS-422A.
- 20 Rechange (SPARE) (D-SUB 9 broches)**
Ce connecteur TS-422A est un connecteur de contrôle de rechange uniquement utilisé à l'usine.
- 21 Matrice (MATRIX) (D-SUB 9 broches)**
Prévu pour la connexion à un commutateur matriciel extérieur. Norme RS-422A.
- 22 Terminal (TERMINAL) (D-SUB 9 broches)**
Prévu pour la connexion à un terminal de contrôle. Norme RS-232C. Sert à l'initialisation et à la maintenance du commutateur. Il est connecté en parallèle au connecteur TERMINAL de la plaquette SG-189 du commutateur.
- 23 E/O universelle (GPI) (D-SUB 25 broches)**
Raccordé à un appareil extérieur, ce connecteur permet l'entrée et la sortie de signaux de déclenchement. Il y a 8 entrées et 7 sorties, et le contrôle de l'état de ces E/S est programmable.
- 24 Signalisation (TALLY) (D-SUB 50 broches)**
Fournit des signaux de signalisation indiquant les signaux sélectionnés, y compris l'état des 32 entrées primaires, des entrées 1 et 2 d'incrustation-couleur interne et des blocs M/E-1 et M/E-2.

1-3. Exemples de configuration de système

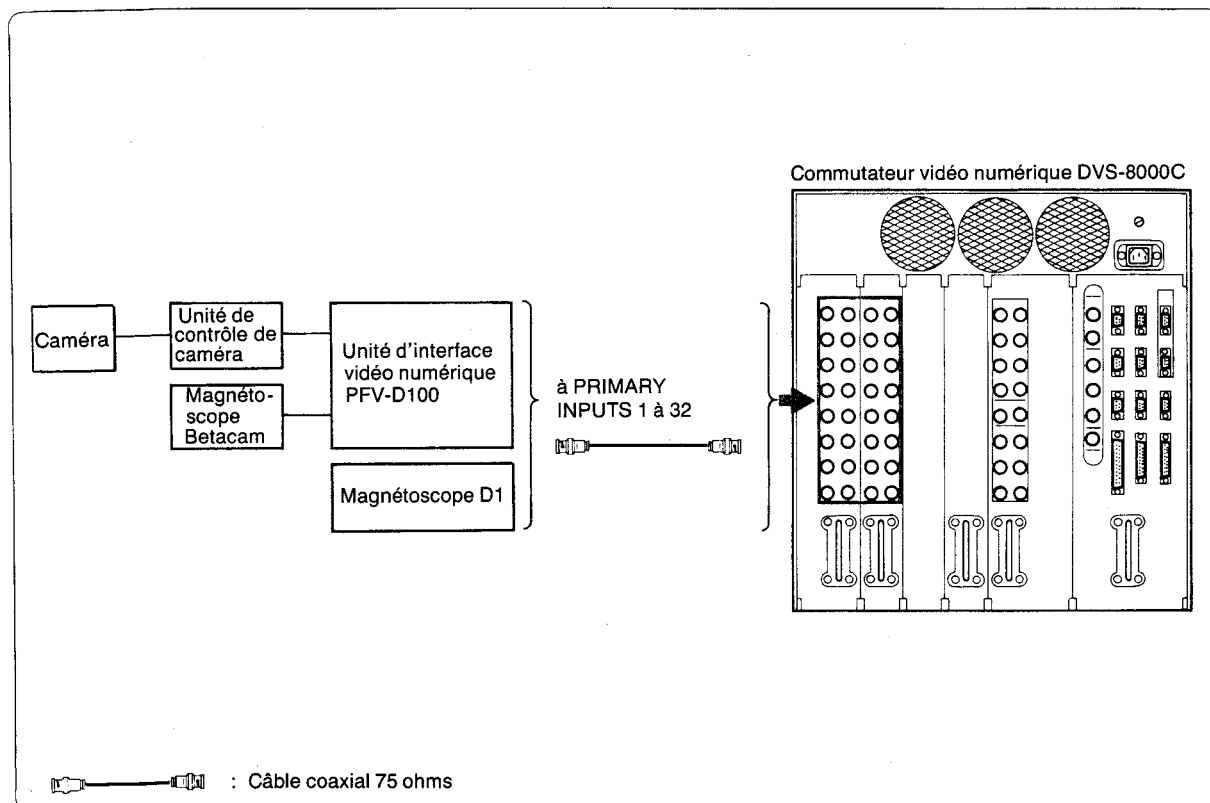
1-3-1. Connexion du panneau de contrôle



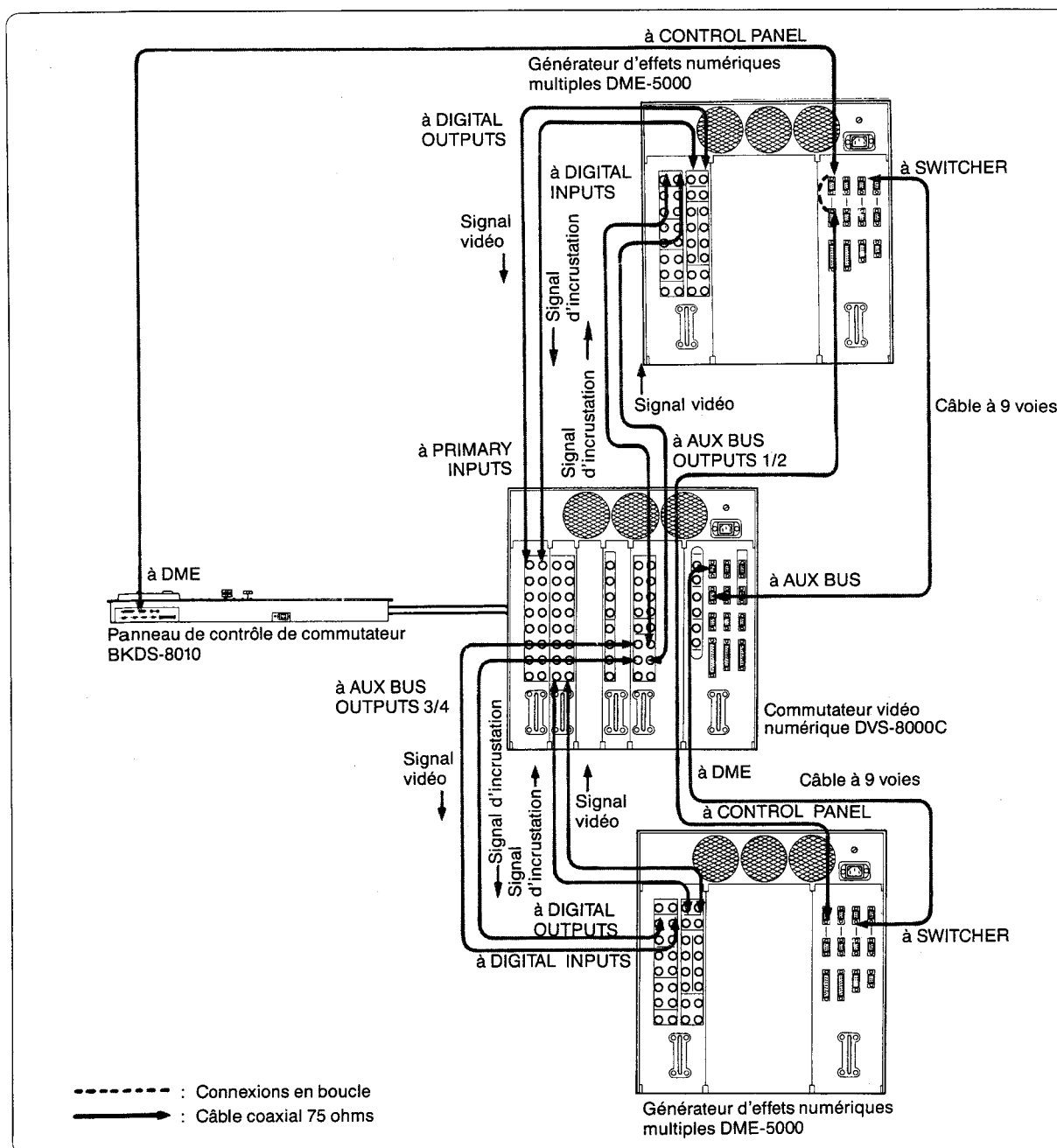
1-3-2. Connexion de l'entrée primaire et du moniteur vidéo



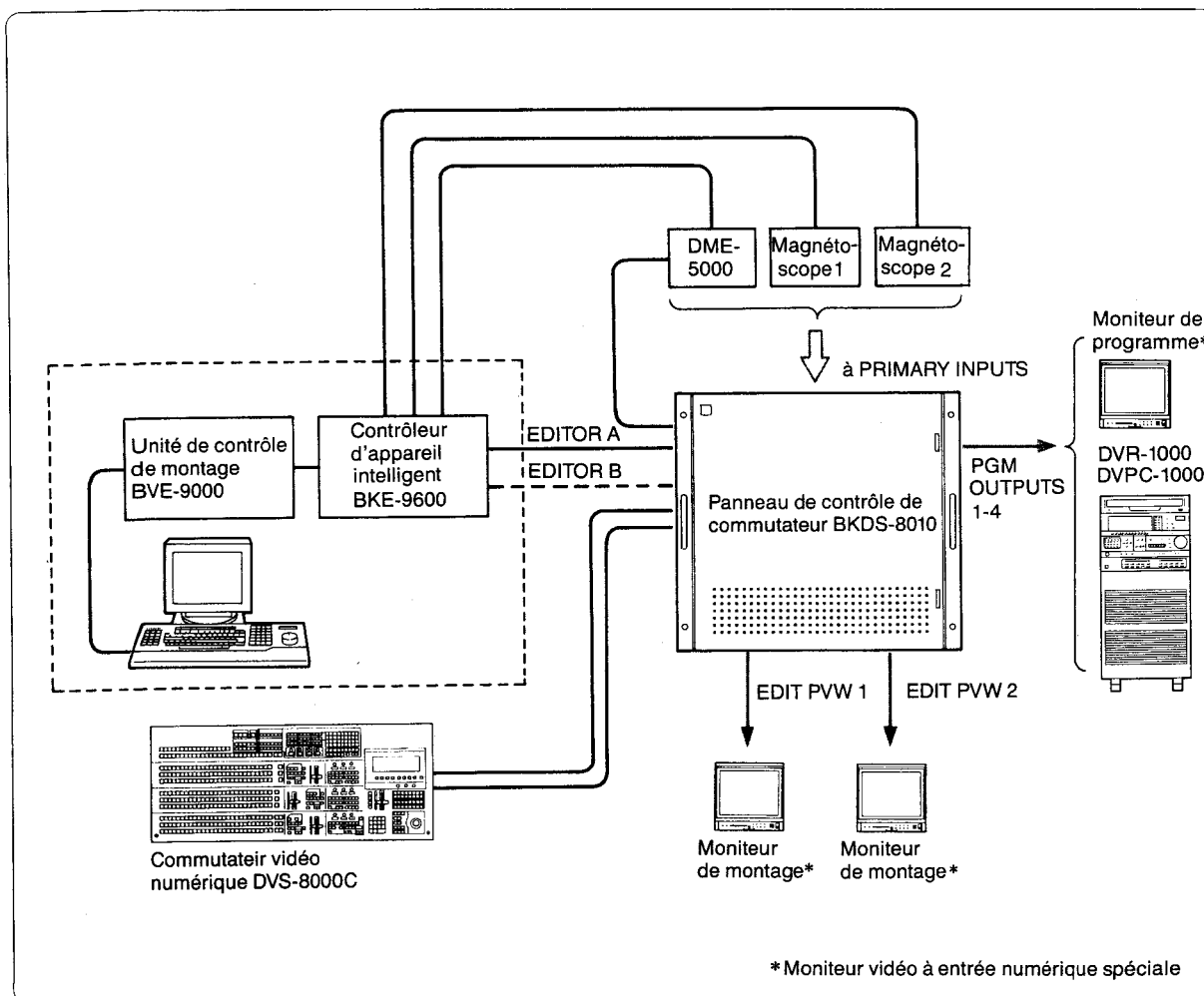
1-3-3. Connexion d'une source d'incrustation-couleur extérieure



1-3-4. Connexion d'un générateur d'effets numériques multiples DME-5000



1-3-5. Connexion d'un système de contrôle de montage BVE-9000



1-4. Spécifications principales

Généralités

Alimentation	Secteur de 90 à 264 V, 50/60 Hz
Consommation	300 W maximum
Plage de températures	Fonctionnement: 5 à 40°C (41 à 104°F) Performance garantie: 10 à 35°C (50 à 95°F)
Dimensions (l/h/p, parties saillantes exclues)	Approx. 424 × 443 × 450 mm (16 3/4 × 17 1/2 × 17 3/4 pouces)
Poids	Approx. 50 kg (110 livres 4 onces)

Connecteurs d'entrée/sortie

PRIMARY INPUTS	Entrées de signal vidéo numérique série, BNC (× 32) Niveau: 800 mV ± 10%, 75 ohms Atténuation: 15 dB (5 à 270 MHz)
MONITOR OUT	Sortie du signal vidéo analogique (Y, B-Y, R-Y), BNC (× 3) Largeur de bande vidéo: plate à 5,0 MHz ± 0,5 dB (Y) plate à 2,0 MHz ± 0,5 dB (B-Y, R-Y)
REF INPUT	Entrée du signal de synchro analogique, BNC (x 2), en boucle Niveau: 0,2 à 5 V
REF OUTPUT	Sortie de signal de synchro analogique, BNC (x 1) Niveau: synchro: 2 V ± 20 mV Ajustement de phase: ± 1H Ajustement de phase du système: + 0,5H à 1,0H
ME-1 OUTPUT PGM/PVW	Sorties de signal vidéo numérique série, BNC (× 2), 75 ohms Niveau: 800 mV ± 10% Vitesse de transmission: 270 Mbps
ME-2 OUTPUT PGM/PVW	Sorties de signal vidéo numérique série, BNC (× 2), 75 ohms Niveau: 800 mV ± 10% Vitesse de transmission: 270 Mbps
PGM OUTPUTS	Sorties de signal vidéo numérique série, BNC (× 4), 75 ohms Niveau: 800 mV ± 10% Vitesse de transmission: 275 Mbps
PVW OUTPUT	Sortie de signal vidéo numérique série, BNC (× 1), 75 ohms Niveau: 800 mV ± 10% Vitesse de transmission: 270 Mbps
CLEAN OUTPUT	Sortie de signal vidéo numérique série, BNC (± 1), 75 ohms Niveau: 800 mV ± 10% Vitesse de transmission: 270 Mbps
AUX BUS OUTPUTS	Sorties de signal vidéo numérique série, BNC (× 4), 75 ohms Niveau: 800 mV ± 10% Vitesse de transmission: 270 Mbps
EDIT PVS OUTPUT 1/2	Sorties de signal vidéo numérique série, BNC (× 2), 75 ohms Niveau: 800 mV ± 10% Vitesse de transmission: 270 Mbps
AC IN	Alimentation secteur, connecteur AC 3 broches (× 1)

Signaux de télécommande

CONTROL PANEL (CONTROL)	Norme RS-422A, D-SUB 9 broches
CONTROL PANNEL (FDD)	Norme RS-422A, D-SUB 9 broches
EDITOR A	Norme RS-422A, D-SUB 9 broches
EDITOR B	Norme RS-422A, D-SUB 9 broches
DME	Norme RS-422A, D-SUB 9 broches
AUX BUS	Norme RS-422A, D-SUB 9 broches
MATRIX	Norme RS-422A, D-SUB 9 broches
USER	Norme RS-422A, D-SUB 9 broches
TERMINAL	Norme RS-422A, D-SUB 25 broches
GPI	Entrées TTL x 2 Sorties de contact de relais (30 V secteur/c.c. max., 0,1A*) x 7 D-SUB 25 broches
TALLY	Sorties de contact de relais (30 V secteur/c.c. max., 0,1 A*) x 7 D-SUB 50 broches

* De charge ohmique

Accessoires standard

Angle de montage dans un rack (fixés au commutateur) (1 lot)
Plaquette d'extension (EX-209) (1)
Cordon d'alimentation (3)
Adaptateur (2 broches) pour cordon d'alimentation (1)
Terminaison 75 ohms (1)
Mode d'emploi et d'entretien (1)

Accessoires en vente séparée

Panneau de contrôle de commutateur BKDS-8010
Plaquette d'incrustation-couleur non corrigée BKDS-8031
Plaquette de mémoire de cadres BKDS-8041
Alimentation de rechange BKDS-8090

Equipement connexe

Générateur d'effets numériques multiples DME-5000/9000
Panneau de contrôle BKDM-5070 pour DME-5000
Système de contrôleur BKDM-9010 pour DME-5000
Système de contrôle de montage BVE-9000

Conception et spécifications sont sujettes à modification sans préavis.

Begleitliteratur zum Digital-Video-Schaltssystem DVS-8000C

Zusammen mit dem Steuerpult BKDS-8010 bildet die Digital-Video-Schalteinheit DVS-8000C das Kernstück des Digital-Video-Schaltsystems DVS-8000C.

Den beiden Geräten liegt die folgende Begleitliteratur bei:

Bedienungs- und Wartungsanleitung DVS-8000C

(Dieses Handbuch liegt der Schalteinheit bei.)

Kapitel 1-1, ÜBERSICHT, gibt einen Überblick über das gesamte Digital-Video-Schaltssystem DVS-8000C, beschreibt und erklärt Funktionsgruppen der Schalteinheit und stellt Konfigurationsbeispiele vor. Dieses Kapitel ist vor allem für Personen bestimmt, die mit dem Management des Schaltsystems betraut sind.

Kapitel 2 und die weiteren Kapitel beschreiben das Anschließen und die Wartung des Systems. Schlagen Sie hier nach, falls Sie nähere Informationen zur Wartung und zur Fehlersuche am System suchen.

Bedienungsanleitung DVS-8000/8000C

(liegt dem Steuerpult bei)

Hier werden die Funktionsgruppen des Steuerpultes und die Bedienung des Schaltsystems DVS-8000C beschrieben; bewahren Sie es deshalb stets griffbereit auf. Das Handbuch behandelt auch die Bedienung der Systemkomponente Digital-Multi-Effektor DME-5000.

Wartungsanleitung BKDS-8010

(liegt dem Steuerpult bei)

Dieses Handbuch beschreibt die Hardware des Steuerpultes; es wird hauptsächlich bei der Vernetzung und Wartung benötigt.

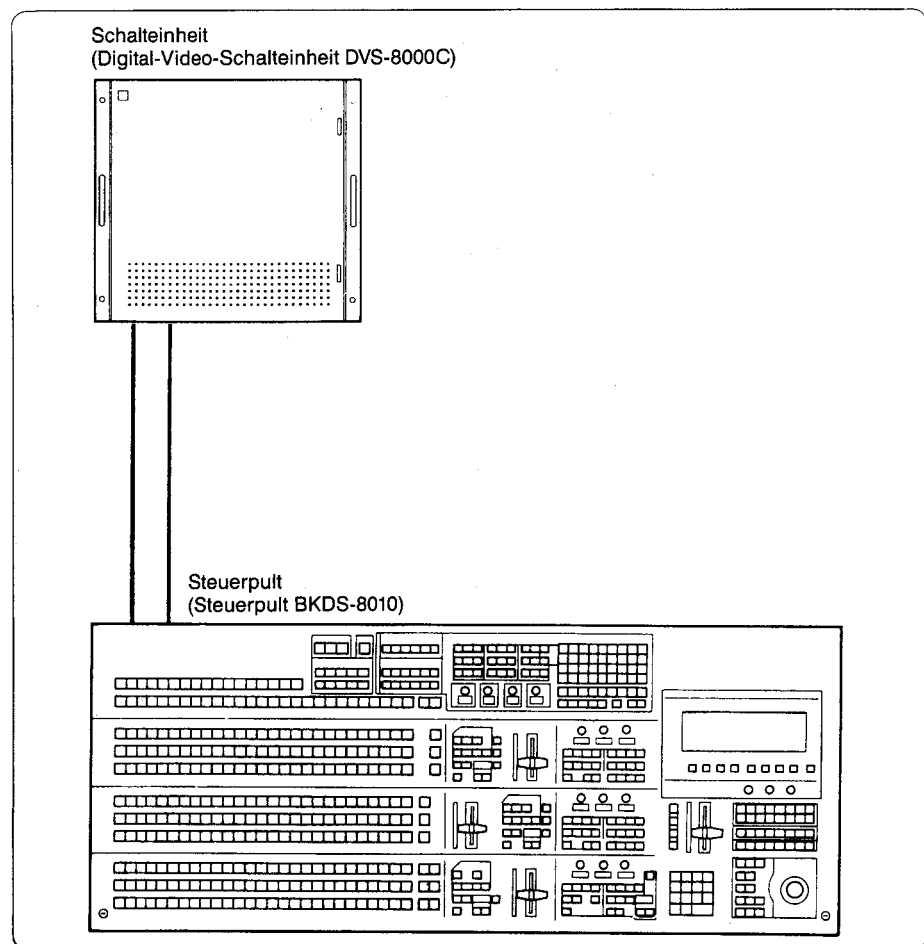
Kapitel 1 BEDIENUNG

1-1. Übersicht

Die Digital-Video-Schalteinheit DVS-8000C ist eine Hochleistungs-Schalteinheit für Signale im D-1-Format, für den Einsatz beim Fernsehen, in Videostudios und bei der Nachbearbeitung. Die Schalteinheit wird im Normalfall vom auf Wunsch erhältlichen Steuerpult BKDS-8010 aus bedient. Die beiden Systemkomponenten werden im Kapitel 1 auch folgendermaßen bezeichnet:

Schalteinheit: Digital-Video-Schalteinheit DVS-8000C

Steuerpult: Steuerpult BKDS-8010



1-1-1. Die wesentlichen Merkmale

Die ausschließlich digitale Signalverarbeitung garantiert störungsfreie Bilder mit bestechender Bildqualität.

Serielle Digitalsignale von Zuspelgeräten wie einem D-1-Videorecorder werden digital verarbeitet und unkonvertiert als Digitalsignale ausgegeben. Um einem Informationsverlust bei der Signalverarbeitung zu verringern, wird das Signal, das an den Ein- und Ausgabe-Schnittstellen mit einer Wortlänge von 10 Bit übertragen wird, intern 14 Bit breit verarbeitet. Auf diese Weise kommen die Vorteile der digitalen Bildverarbeitung voll zum Zuge—beträchtlich höhere Bildqualität für Videoeffekte der Spitzenklasse. Der Pufferspeicher der Eingabeeinheit sorgt automatisch für eine Phasenstabilisierung.

Serielles Digitalformat bei allen Ein-/Ausgabeoperationen

Die digitalen Ein- und Ausgabesignale liegen seriell an, d.h. sie können mit einem einzigen 75-Ohm-Koaxialkabel übertragen werden. Im Vergleich zur parallelen Datenübertragung wird das Gesamtsystem überschaubarer und läßt sich einfacher vernetzen.

Darüber hinaus können die Daten ohne wahrnehmbare Beeinträchtigung über wesentlich größere Entfernungen übertragen werden.

Mehrkanal-Primär-Eingang

Die Schalteinheit ist in Standardausführung eingangsseitig mit 32 Digitalkanälen ausgestattet. Um Kompatibilität mit bereits bestehenden Analogsystemen zu gewährleisten, kann die Einheit mit der als Sonderzubehör erhältlichen Digital-Video-Schnittstelle PFV-D100 erweitert werden, die ihrerseits mit der als Sonderzubehör erhältlichen A/D-Wandlerkarte BKPF-101C und/oder der D/A-Wandlerkarte BKPF-102C bestückt werden kann.

Ein jedes der Ausgangssignale läßt sich als Hintergrund oder Füll- und Quell-Key definieren.

Bedienung mit angeschlossenem Digital-Multi-Effektor DME-5000

Die Schalteinheit DVS-8000C sowie der Digital-Multi-Effektor DMS-5000 lassen sich über ein und das selbe Steuerpult ansteuern. Die gemeinsame Bedienung der beiden Komponenten, das sogenannte DME-LINK(R), gestattet eindrucksvolle DME-Effekte; ein auf der Schalteinheit durchgeführter Tricküberblendevorgang wird dabei mit Effekten modifiziert. Das Steuerpult erlaubt die interaktive und menügesteuerte Bedienung der Schalteinheit und des Digital-Multi-Effektors DME-5000.

Breites Spektrum an Erweiterungskarten

Das System läßt sich mit zahlreichen Optionen wie Analog-Komponenteneingang, Chroma-Key-Einheit und Bildspeichern erweitern. Eine jede der Optionen steht nach Einfügen der entsprechenden Erweiterungskarte zur Verfügung.

Peripherie-Schnittstellen

Die Schalteinheit kann mit Editiersystemen der Spitzenklasse, wie dem Editiergerät BVE-9000, vernetzt werden. Danach lassen sich Trickblenden simulieren und Parameter und Daten des Steuerpultes speichern. Je nach Aufgabenstellung läßt sich das System zusätzlich erweitern: mit Matrix-Schalteinheiten, Terminals zur Steuerung, Tally-Geräten und der Digital-Video-Schnittstelle PFV-D100.

LSI-Architektur

Die Funktionsgruppen der Schalteinheit wurden in LSI-Technik realisiert—kompakt und verlustleistungsarm.

Überschaubare Wartung

Um eventuelle Reparaturzeiten möglichst kurz zu halten, sind die einzelnen Funktionsgruppen wie Netzteil, Leiterplatten und das Kühlgebläse von der Gerätefrontseite her zugänglich. Potentiometer und Schalter wurden wo möglich durch softwaregesteuerte Lösungen ersetzt. Ein defektes Netzteil läßt sich in kürzester Zeit durch das als Sonderzubehör erhältliche Ersatz-Netzteil BKDS-8090 ersetzen.

Wirkungsvolle Funktionen

Das Steuerpult verfügt über zwei M/E-Module, welche je zwei Key-Einheiten, sowie ein PGM/PST-Modul, das eine weitere Key-Einheit steuern kann. Die Key-Einheiten gestatten zahlreiche Modifikationen, um Schritt für Schritt komplexe Videoeffekte aufzubauen. Auf dem 3,5-Zoll-Floppy-Disk-Laufwerk, mit dem das Steuerpult standardmäßig ausgerüstet ist, lassen sich so aufgebaute Effekte zur späteren Verwendung abspeichern. Nähere Hinweise dazu finden Sie in der Bedienungsanleitung des Steuerpultes.

1-1-2. Wichtige Hinweise

Einstellen des Modus-Wahlschalters

Wählen Sie am Modus-Wahlschalter noch vor der ersten Inbetriebnahme der Schalteinheit die Fernsehnorm, also 525 oder 625. Nähere Hinweise zum Modus-Wahlschalter finden Sie auf Seite 1-10 (G).

Entfernen und Einführen der Steckkarten

Ziehen Sie die Steckkarten nur wenn unbedingt notwendig. Beachten Sie beim Ziehen und Einführen einer Steckkarte stets die folgenden Hinweise:

- Vergewissern Sie sich, daß die Schalteinheit ausgeschaltet ist. Hinweise zur Lage des Hauptschalters finden Sie auf Seite 1-6 (G).
- Vergewissern Sie sich vor dem Einschalten der Schalteinheit noch einmal, daß die Steckplatznummern auf Steckkarte und der Innenseite des Schalteinheitsgehäuses übereinstimmen. Nähere Hinweise dazu finden Sie im Abschnitt 2-5-2, "Installation of Card Boards" (Einführen von Steckkarten).

Falsches Einführen von Steckkarten kann Bauteile beschädigen.

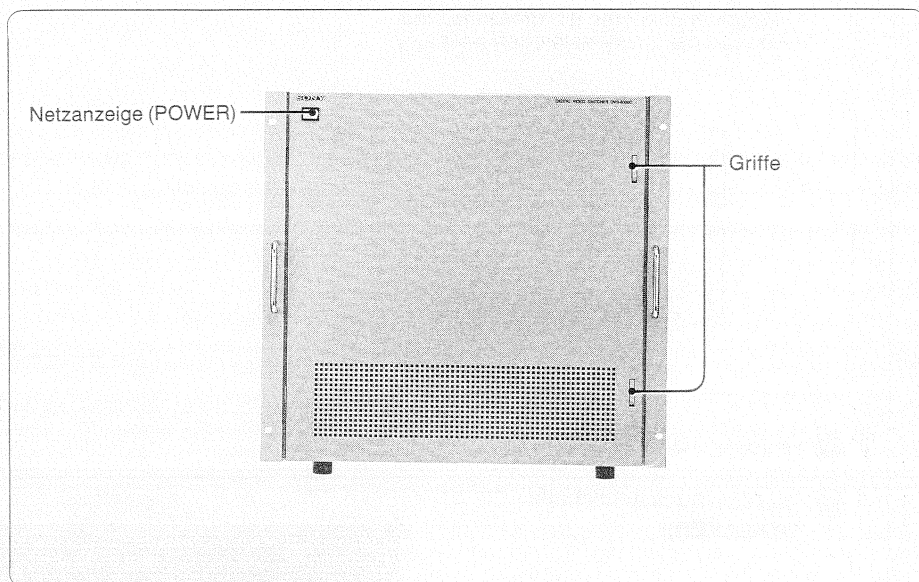
Strombegrenzungsschutz

Wenn ein unzulässig hoher Strom gezogen wird, spricht der Strombegrenzungsschutz an. Öffnen Sie die Frontverkleidung und drücken Sie auf den weißen Rückstellschalter des Schützes, jedoch nur, falls bei eingeschaltetem Hauptschalter (Stellung ON) tatsächlich kein Strom fließt. Nähere Hinweise zur Lage des Rückstellschalters finden Sie auf Seite 1-6 (G).

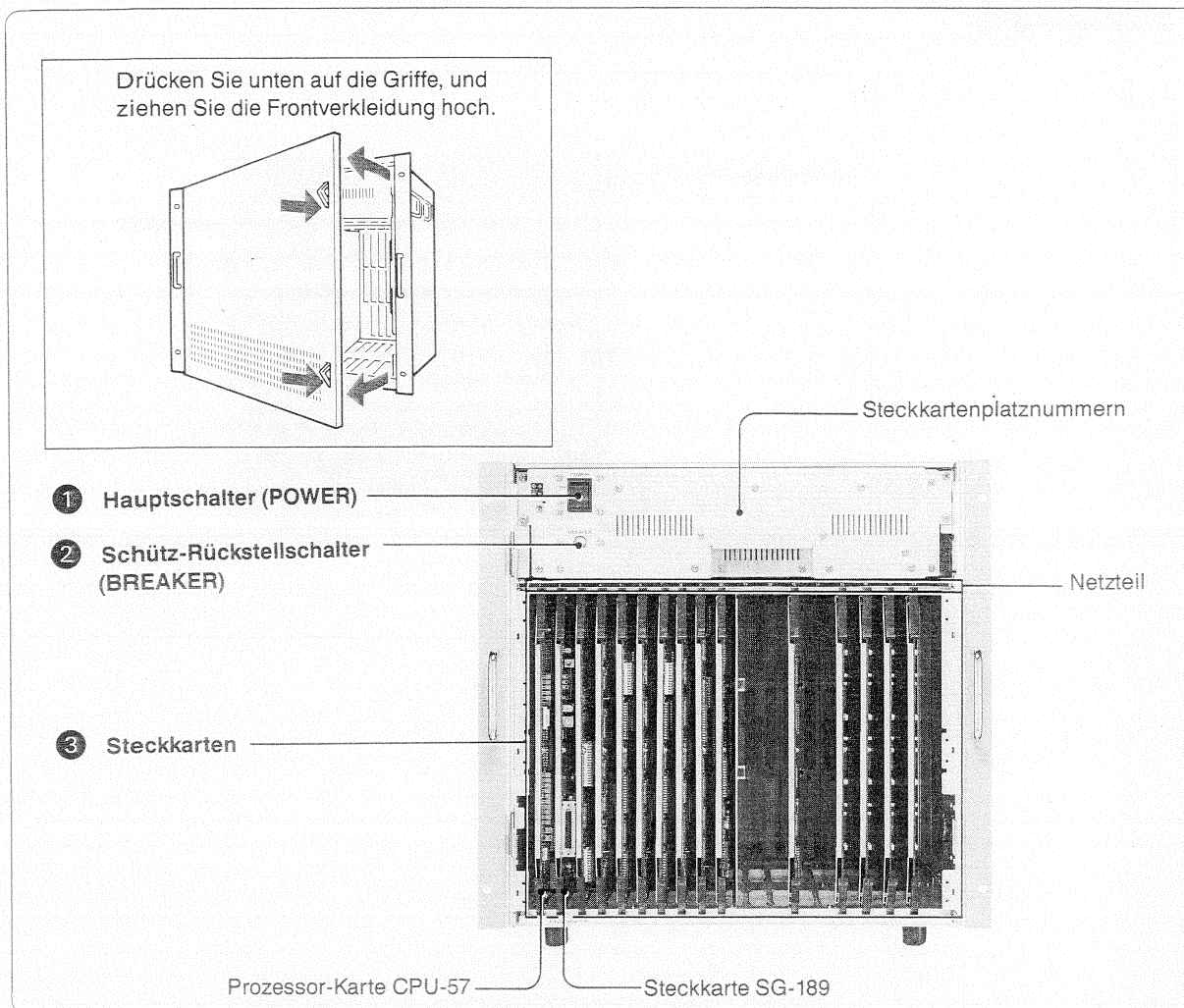
1-2. Lage und Funktion der Teile

1-2-1. Frontverkleidung und Geräteinneres

Frontverkleidung



Geräteinneres



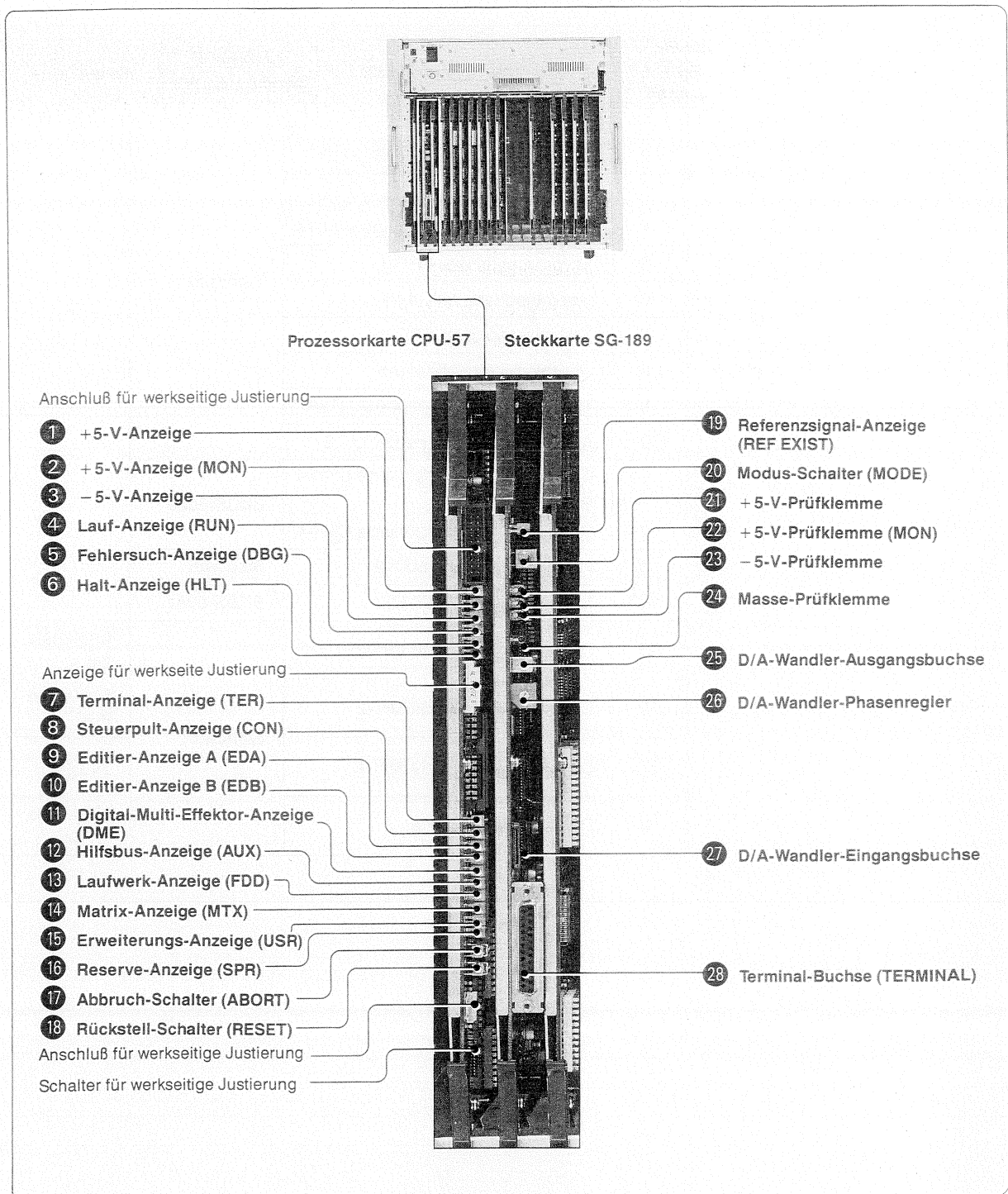
- 1 **Hauptschalter (POWER)**
Zum Ein- und Ausschalten der Schalteinheit.
- 2 **Schütz-Rückstellschalter (BREAKER)**
Der Schütz spricht an, wenn ein unzulässig hoher Strom gezogen wird; der Rückstellschalter springt in diesem Fall heraus.

③ Steckkarten

Die 18 Steckplätze sind für die folgenden Steckkarten vorgesehen. Steckplätze für die als Sonderzubehör erhältliche Erweiterungskarten sind mit einem Sternchen gekennzeichnet.

Steckplatz-nummer	Bezeichnung der Steckkarte	Standard/Sonderzubehör	Bemerkung
1	Prozessorkarte CPU-57	Standard	
2	Synchrongeneratorkarte SG-189		
3	Zusatz-Trickblendenkarte WKG-5		
4	Standard-Trickblendenkarte WKG-4		
5	Keyprozessorkarte KPC-1		
6	Überblendkarte MIX-4 (A)		
7	Keyprozessorkarte KPC-1		
8	Überblendkarte MIX-4 (A)		
9	Titelüberblendkarte MIX-6 (A) DSK		
10	Ausgangsprozessorkarte OUT-2		
11 *	Chroma-Key-Prozessorkarte CRK-4 BKDS-8013	BKDS-8030	
12 *	Chroma-Key-Prozessorkarte CRK-4		
13	Farbgeneratorkarte MAT-2	Standard	
14 *	Bildspeicherkarte MY-50	BKDS-8041	
15	Digital-Eingangskarte XPT-2	Standard	für Kanäle 1-8
16	Digital-Eingangskarte XPT-2		für Kanäle 9-16
17	Digital-Eingangskarte XPT-2		für Kanäle 17-24
18	Digital-Eingangskarte		für Kanäle 25-32

Die Prozessorkarte CPU-57 und die Steckkarte SG-189 sind frontseitig mit Anzeigen ausgestattet, die den jeweiligen Betriebsstatus sowie laufende Test- und Einstellvorgänge anzeigen. Im folgenden werden die beiden Karten näher beschrieben.



3 Steckkarten

Die 18 Steckplätze sind für die folgenden Steckkarten vorgesehen. Steckplätze für die als Sonderzubehör erhältliche Erweiterungskarten sind mit einem Sternchen gekennzeichnet.

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1	Prozessorkarte CPU-57	Standard	
2	Synchrongeneratorkarte SG-189		
3	Zusatz-Trickblendenkarte WKG-5		
4	Standard-Trickblendenkarte WKG-4		
5	Keyprozessorkarte KPC-1		
6	Überblendkarte MIX-4 (A)		
7	Keyprozessorkarte KPC-1		
8	Überblendkarte MIX-4 (A)		
9	Titelüberblendkarte MIX-6 (A) DSK		
10	Ausgangsprozessorkarte OUT-2		
11 *	Chroma-Key-Prozessorkarte CRK-4 BKDS-8013	BKDS-8030	
12 *	Chroma-Key-Prozessorkarte CRK-4		
13	Farbgeneratorkarte MAT-2	Standard	
14 *	Bildspeicherkarte MY-50	BKDS-8041	
15	Digital-Eingangskarte XPT-2	Standard	für Kanäle 1-8
16	Digital-Eingangskarte XPT-2		für Kanäle 9-16
17	Digital-Eingangskarte XPT-2		für Kanäle 17-24
18	Digital-Eingangskarte		für Kanäle 25-32

- ① **+5-V-Anzeige (grün)**
Wenn an den Steckkartenschlitzen 1 bis 9 eine Versorgungsspannung von +5 Volt anliegt, leuchtet die Anzeige auf. Die Anzeige erlischt, sobald die Sicherung F1 auf der Prozessorkarte CPU-57 anspricht oder das Netzteil ausfällt.
- ② **+5-V-Anzeige (MON) (grün)**
Wenn an den Steckkartenschlitzen 10 bis 18 eine Versorgungsspannung von +5 Volt anliegt, leuchtet die Anzeige auf. Die Anzeige erlischt, wenn das +5-V-Netzteil ausfällt.
- ③ **-5-V-Anzeige (grün)**
Wenn eine Versorgungsspannung von -5 Volt anliegt, leuchtet die Anzeige auf. Die Anzeige erlischt, sobald die Sicherung F2 auf der Prozessorkarte CPU-57 anspricht oder das -5-V-Netzteil ausfällt.
- ④ **Lauf-Anzeige (RUN) (grün)**
Die Statusanzeige leuchtet solange der Prozessor störungsfrei arbeitet; sie erlischt, wenn auf dem Prozessor Daten durchgesetzt werden.
- ⑤ **Fehlersuch-Anzeige (DBG) (grün)**
Diese Anzeige wird lediglich während der Programmierarbeiten vor der Auslieferung verwendet.
- ⑥ **Halt-Anzeige (HLT) (grün)**
Diese Statusanzeige leuchtet, solange auf dem Prozessor Daten durchgesetzt werden.
- ⑦ bis ⑯ **Kommunikations-Statusanzeigen (rot)**
Diese Anzeigen weisen auf Datenübertragung über die Schnittstellenbuchsen an der Geräterückseite hin. Bei der Datenübertragung über den entsprechenden Kanal blinkt die zugeordnete Anzeige. Die folgende Tabelle zeigt die Zuordnung zwischen den einzelnen Anzeigen und Schnittstellen.

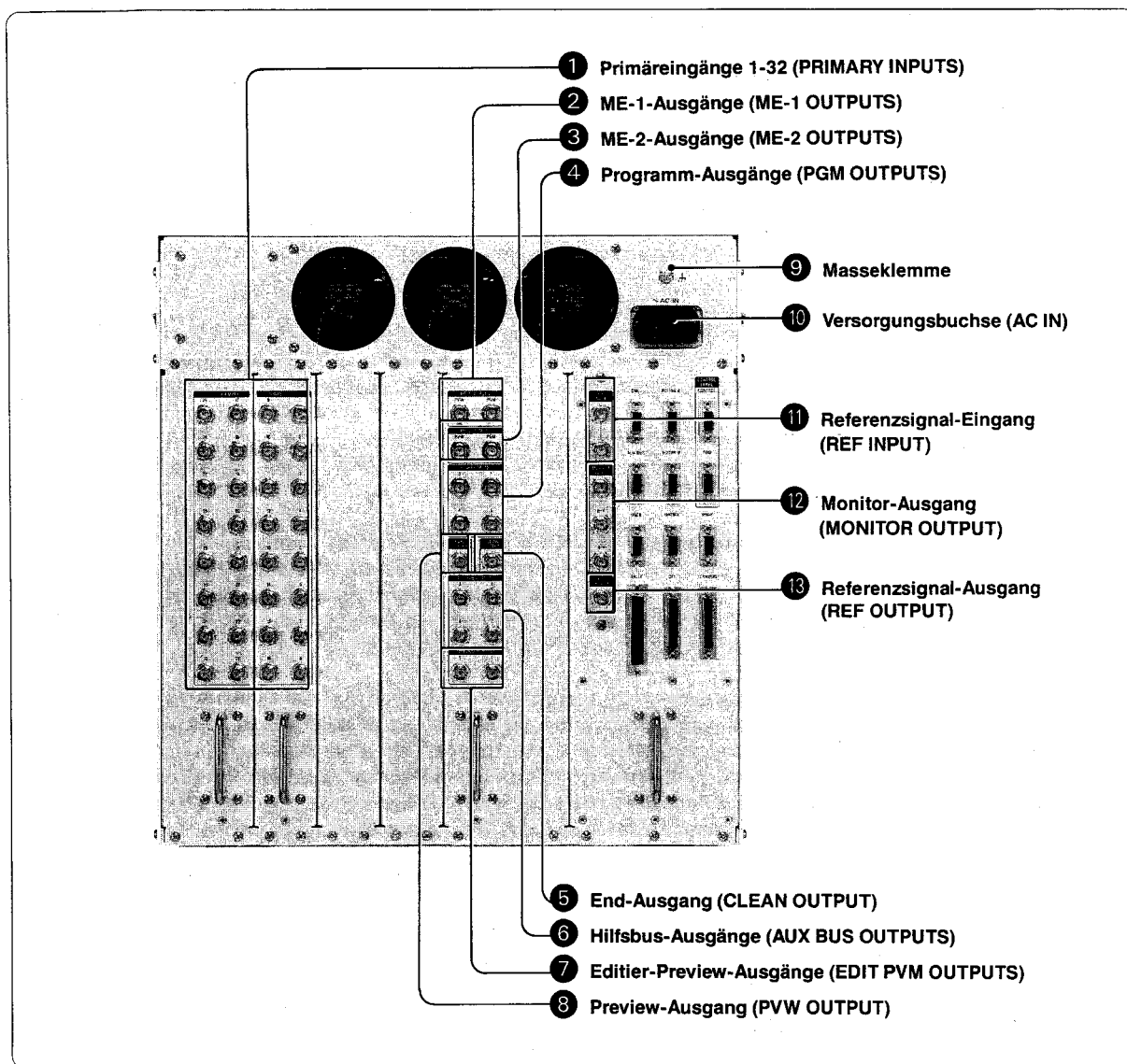
Nr.	Anzeige	Buchse
7	TER	TERMINAL
8	CON	CONTROL PANEL (CONTROL)
9	EDA	EDITOR A
10	EDB	EDITOR B
11	DME	DME
12	AUX	AUX BUS
13	FDD	CONTROL PANEL (FDD)
14	MTX	MATRIX
15	USR	USER
16	SPR	SPARE

- ⑰ **Abbruch-Schalter (ABORT)**
Dieser Schalter wird lediglich bei der Systemprüfung im Werk verwendet.
- ⑱ **Rückstell-Schalter (RESET)**
Mit diesem Schalter läßt sich das System erneut initialisieren (Warmstart).
- ⑲ **Referenzsignal-Anzeige (REF EXIST) (grün)**
Solange am Anschluß REF INPUT an der Geräterückseite ein Synchronsignal Coder gleichwertiges anliegt, leuchtet die Anzeige auf.

- 20 Modus-Schalter**
 Zum Wählen der Fernsehnorm, also 525 oder 625 Zeilen Auflösung (NTSC oder PAL).
- 21 +5-V-Prüfklemme (rot)**
 Zum Messen der +5-V-Versorgungsspannung für die Steckplätze 1 bis 9 bei der ersten Inbetriebnahme oder bei der Erweiterung mit zusätzlichen Steckkarten. Die Spannung muß in diesen Fällen eventuell nachgeregelt werden.
- 22 +5-V-Prüfklemme (MON) (rot)**
 Zum Messen der +5-V-Versorgungsspannung für die Steckplätze 10 bis 18 bei der ersten Inbetriebnahme oder bei der Erweiterung mit zusätzlichen Steckkarten. Die Spannung muß in diesen Fällen eventuell nachgeregelt werden.
- 23 –5-V-Prüfklemme (blau)**
 Zum Prüfen der –5-V-Versorgungsspannung für das Gesamtsystem bei der ersten Inbetriebnahme oder der Erweiterung mit zusätzlichen Steckkarten. Die Spannung muß in diesen Fällen eventuell nachgeregelt werden.
- 24 Masse-Prüfklemme (schwarz)**
 Messen Sie das Potential der Prüfklemmen 21 und 23 stets gegen diese Masseklemme.
- 25 D/A-Wandler-Ausgangsbuchse**
 Das über die Buchse 27 des D/A-Wandlers eingespeiste Signal wird in ein Analogsignal konvertiert und über diese Buchse ausgegeben. Die Buchse dient zu Messungen bei Abstimmarbeiten.
- 26 D/A-Wandler-Phasenregler**
 Zum Einstellen der Taktphase für die Digital-Analog-Konversion des über die D/A-Wandler-Eingangsbuchse 27 eingespeisten Signals.
- 27 D/A-Wandler-Eingangsbuchse**
 Verbinden Sie diese Buchse durch ein Kabel mit der Digital-TP-Buchse auf einer der Steckkarten, um das Digitalsignal einzuspeisen. Das Signal wird konvertiert und als Analogsignal über die D/A-Wandler-Ausgangsbuchse 25 ausgegeben.
- 28 Terminal-Buchse (TERMINAL)**
 Zum Anschluß eines Steuerterminals zur Eingabe der Grundeinstellungsparameter oder zur System-Wartung. Diese RS-232C-Schnittstelle liegt parallel zur TERMINAL-Buchse an der Geräterückseite.

1-2-2. Geräterückseite

Buchsen



- ① **Primäreingänge 1-32 (PRIMARY INPUTS)**
Zur Eingabe der seriellen Digitalsignale. Standardmäßig ist das Gerät mit 32 Kanälen ausgestattet.
- ② **ME-1-Ausgänge (ME-1 OUTPUTS) (BNC-Buchsen)**
Hier wird das Bild, das gerade auf dem M/E-1-Block des Steuerpultes verarbeitet wurde, als serielles Digitalsignal ausgegeben. Schließen Sie an der PGM-Buchse einen Monitor an, um das aktuelle ausgegebene Bild anzuzeigen. Auf einem an der PVW-Buchse angeschlossenen Monitor wird das Bild, so wie es nach dem nächsten Übergang ausgegeben werden wird, angezeigt.
- ③ **ME-2-Ausgänge (ME-2 OUTPUTS) (BNC-Buchse)**
Hier wird das Bild, das gerade auf dem M/E-2-Block des Steuerpultes verarbeitet wurde, als serielles Digitalsignal ausgegeben. Auch hier stehen die Buchsen zum Anschluß eines Programm- und Preview-Monitors zur Verfügung.
- ④ **Programm-Ausgänge (PGM OUTPUTS) (BNC-Buchse)**
Hier wird das Bild, das gerade auf dem PGM/RST-Block des Steuerpultes verarbeitet wurde, als serielles Digitalsignal ausgegeben. An den vier Buchsen, an welchen das fertig verarbeitete Signal anliegt, können Monitore bzw. Videorecorder angeschlossen werden.
- ⑤ **End-Ausgang (CLEAN OUTPUT) (BNC-Buchse)**
Hier wird das fertig verarbeitete Signal vom PGM/RST-Block ausgegeben. Etwaige Titel sind jedoch nicht überblendet.
- ⑥ **Hilfsbus-Ausgänge 1-4 (AUX BUS OUTPUTS) (BNC-Buchsen)**
Die Schalteinheit ist mit 4 Hilfsbussen ausgestattet, welche die Signalausgabe an externe Systemkomponenten wie Trickbildgeneratoren, übernehmen. Über die vier Buchsen werden die Signale ausgegeben, die dem entsprechenden Bus zugeordnet wurden. Die Signale lassen sich vom Steuerpult den einzelnen Kanälen zuordnen.
- ⑦ **Editier-Preview-Ausgänge 1-2 (EDIT PVM OUTPUTS) (BNC-Buchsen)**
An diesen beiden Buchsen werden die Signale ausgegeben, die vom Steuerpult aus dem Preview-Bus zugeordnet wurden. Zum Beispiel: Wenn die Schalteinheit von einem Editiergerät aus gesteuert wird, können über diese Kanäle Monitore gespeist werden. An beiden Buchsen liegt das gleiche Signal an. Darüber hinaus wird das gleiche Bild als Analogsignal über die MONITOR OUTPUT-Buchse ⑩ ausgegeben.
- ⑧ **Preview-Ausgang (PVW-Ausgang) (BNC-Buchse)**
Hier wird das Bild so ausgegeben, wie es nach einem Effektübergang, der auf dem PGM/PST-Modul des Steuerpultes durchgeführt wird, durch die PGM OUTPUT-Buchsen ④ ausgegeben werden wird. Schließen Sie hier also einen Preview-Monitor an, um das Ergebnisbild vorher beurteilen zu können.
- ⑨ **Masseklemme**
Zum Anschluß an die gemeinsame System-Masse.
- ⑩ **Versorgungsbuchse (AC IN)**
Zum Versorgen der Einheit mit einer Wechselspannung zwischen 90 und 264 Volt über das mitgelieferte Netzkabel.

11 Referenzsignal-Eingänge (REF INPUT) (BNC-Buchsen)

Über diese durchgeschleiften Buchsen kann, sofern notwendig, ein externes Referenzsignal (Synchronisationssignal) eingegeben werden. Legen Sie das Referenzsignal auf eine beliebige Buchse; das gleiche Signal liegt an der verbleibenden Buchse an und kann dort abgegriffen werden. Schließen Sie an der nicht benutzten Buchsen stets den mitgelieferten 75-Ohm-Abschlußwiderstand an.

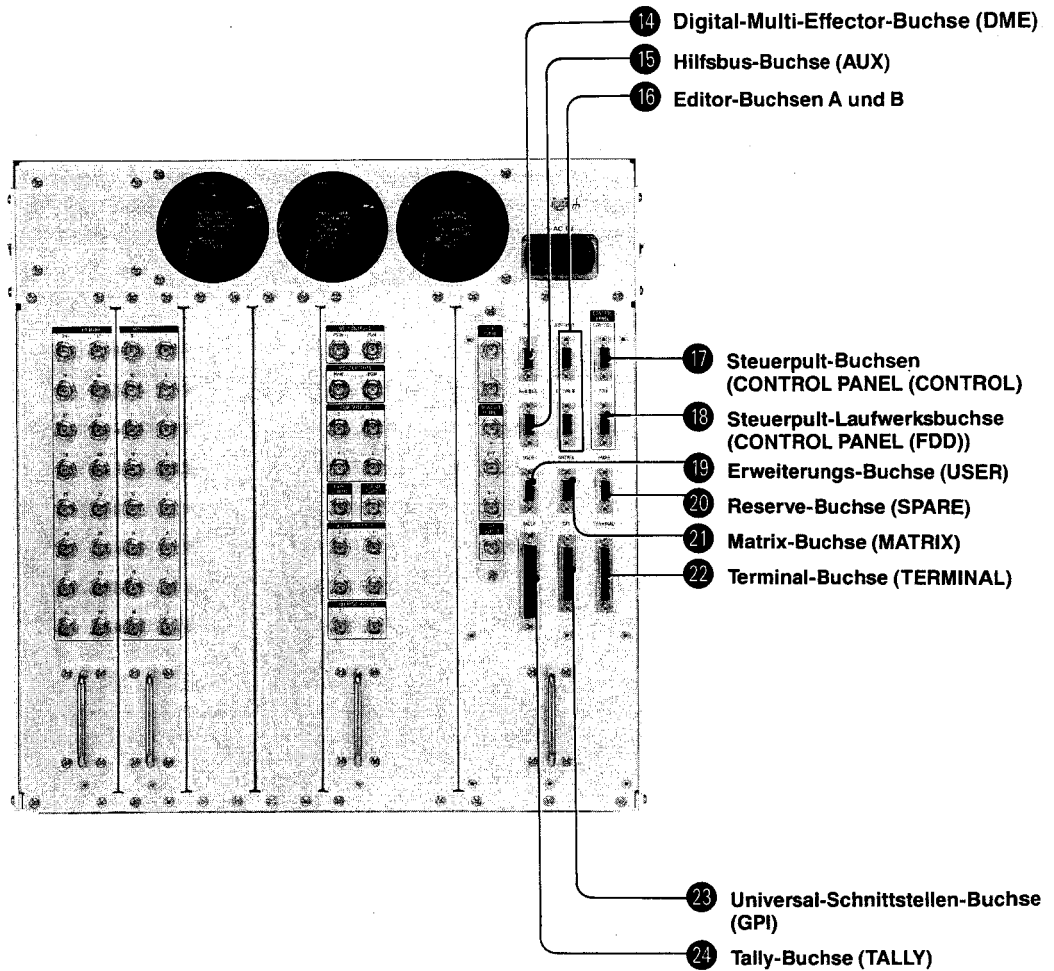
12 Monitor-Ausgang (MONITOR OUTPUT) (BNC-Buchse)

Hier wird das Analogsignal vom Preview-Bus ausgegeben, welches identisch mit den an den EDIT PVW OUTPUTS-Buchsen 7 ausgegebenen Signalen ist.

13 Referenzsignal-Ausgang (REF OUTPUT) (BNC-Buchse)

Hier wird das Analog-Referenzsignal (Synchronisationssignal) ausgegeben. Die Phasenlage dieses Signals gegenüber dem Referenzsignal, das an der REF INPUT-Buchse 11 eingespeist wird, kann in den Grenzen ± 1 H eingestellt werden.

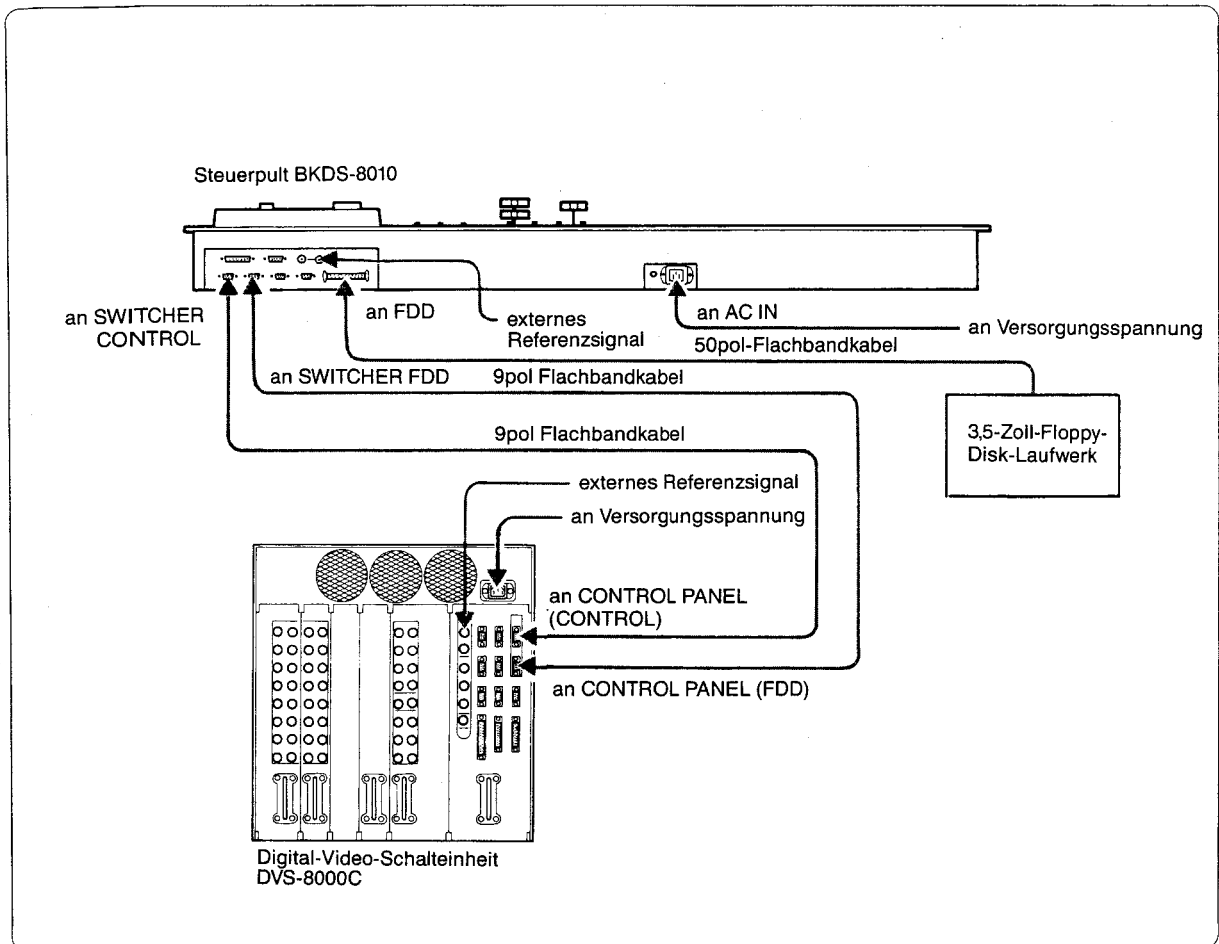
Schnittstellen-Buchsen



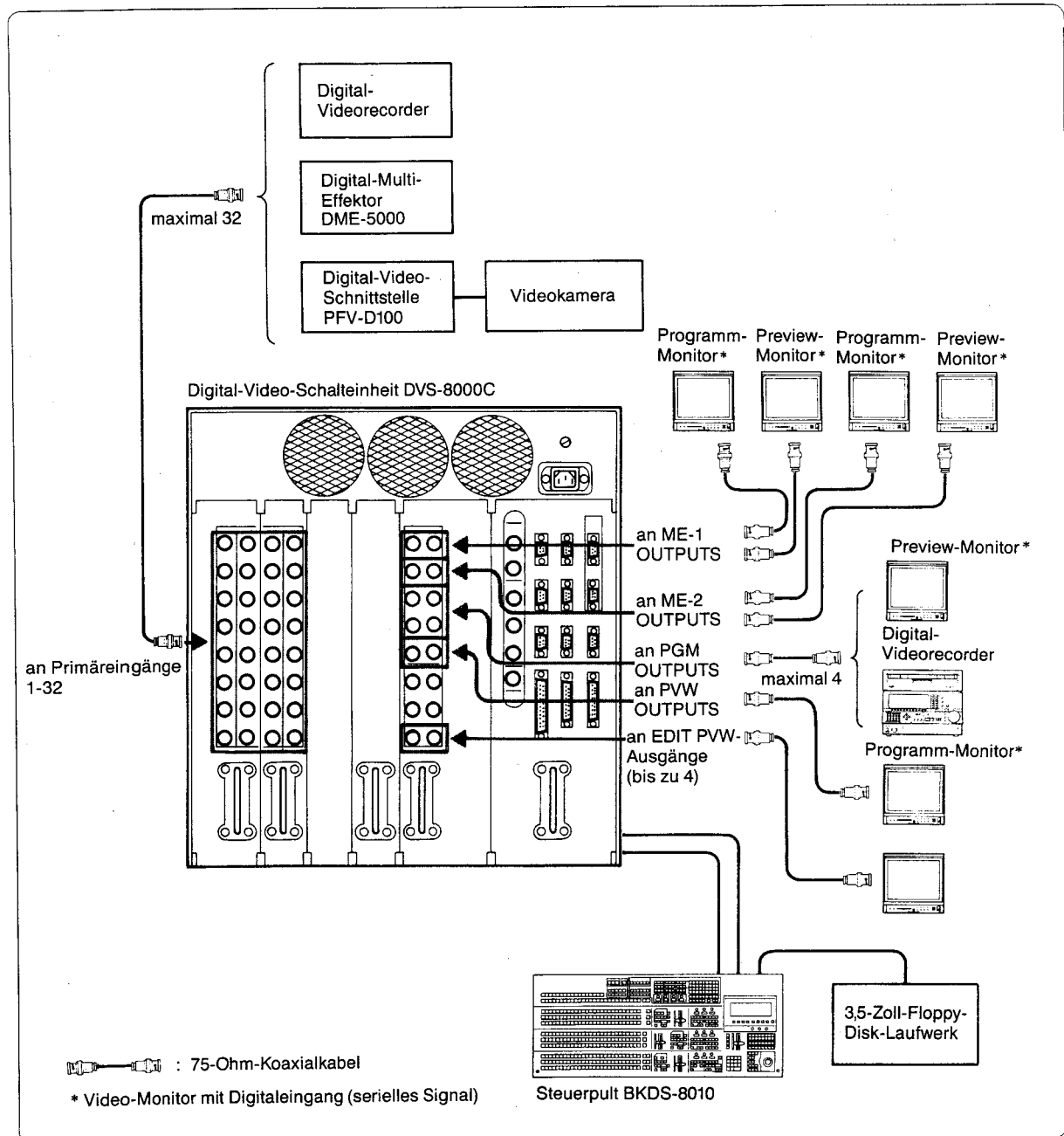
- 14 Digital-Multi-Effektor-Buchse (DME) (9pol D-SUB-Buchse)**
 Zum Anschluß des Digital-Multi-Effektors DME-5000. Die Schnittstelle entspricht dem Standard RS-422A.
- 15 Hilfsbus-Buchse (AUX) (9pol D-SUB-Buchse)**
 Zum Anschluß an einen zweiten Digital-Multi-Effektor DME-5000 für die Steuerung der 4 in der Schalteinheit integrierten Hilfsbusse (AUX 1-4). Die Schnittstelle entspricht dem Standard RS-422A.
- 16 Editor-Buchsen A und B (9pol D-SUB-Buchsen)**
 Zum Anschluß externer Systemkomponenten, von denen aus das Schaltsystem gesteuert werden kann, wie das Editiergerät BVE-9000.
 Belegen Sie zuerst die EDITOR-Buchse A; die EDITOR-Buchse B dient zur späteren Systemerweiterung.
- 17 Steuerpult-Buchse (CONTROL PANEL (CONTROL)) (9pol D-SUB-Buchse)**
 Zum Anschluß des Steuerpults BKDS-8010. Über diese RS-422A-Schnittstelle lassen sich alle Funktionen der Schalteinheit steuern.
- 18 Steuerpult-Laufwerksbuchse (CONTROL PANEL (FDD)) (9pol D-SUB-Buchse)**
 Über diese RS-422A-Schnittstelle findet der Datenaustausch zwischen der Schalteinheit und dem am Steuerpult angeschlossenen Floppy-Disk-Laufwerk statt.
- 19 Erweiterungs-Buchse (USER) (9pol D-SUB-Buchse)**
 An diese RS-422A-Schnittstelle lassen sich bei einer zukünftigen Systemerweiterung externe Komponenten anschließen.
- 20 Reserve-Buchse (9pol D-SUB-Buchse)**
 Über diese RS-422A-Schnittstelle läßt sich die Schalteinheit ansteuern; sie wird ausschließlich vor der Auslieferung im Werk verwendet.
- 21 Matrix-Buchse (MATRIX) (9pol D-SUB-Buchse)**
 Zum Anschluß einer externen Matrix-Schalteinheit. Die Schnittstelle entspricht dem Standard RS-422A.
- 22 Terminal-Buchse (TERMINAL) (25pol D-SUB-Buchse)**
 An dieser RS-232C-Schnittstelle läßt sich ein Terminal anschließen. Die Buchse liegt parallel zur TERMINAL-Buchse der Steckkarte SG-189 der Schalteinheit und dient zum Hochfahren des Systems und zur Wartung.
- 14 Universal-Schnittstellen-Buchse (GPI) (25pol D-SUB-Buchse)**
 Über die Universal-Schnittstelle läßt sich die Datenübertragung zu und von externen Systemkomponenten steuern. Die 8 Eingänge und 7 Ausgänge lassen sich softwaregesteuert zuordnen.
- 24 Tally-Buchse (TALLY) (50pol D-SUB-Buchse)**
 Über diese Buchse werden Tallysignale ausgegeben, um die aktuell ausgegebenen Signale zu kennzeichnen. Tallysignale stehen zur Verfügung für: die 32 Primärkanäle, die internen Chroma-Key-Eingänge 1 und 2 und die Module M/E-1 und M/E-2.

1-3. Beispiele zur Systemkonfiguration

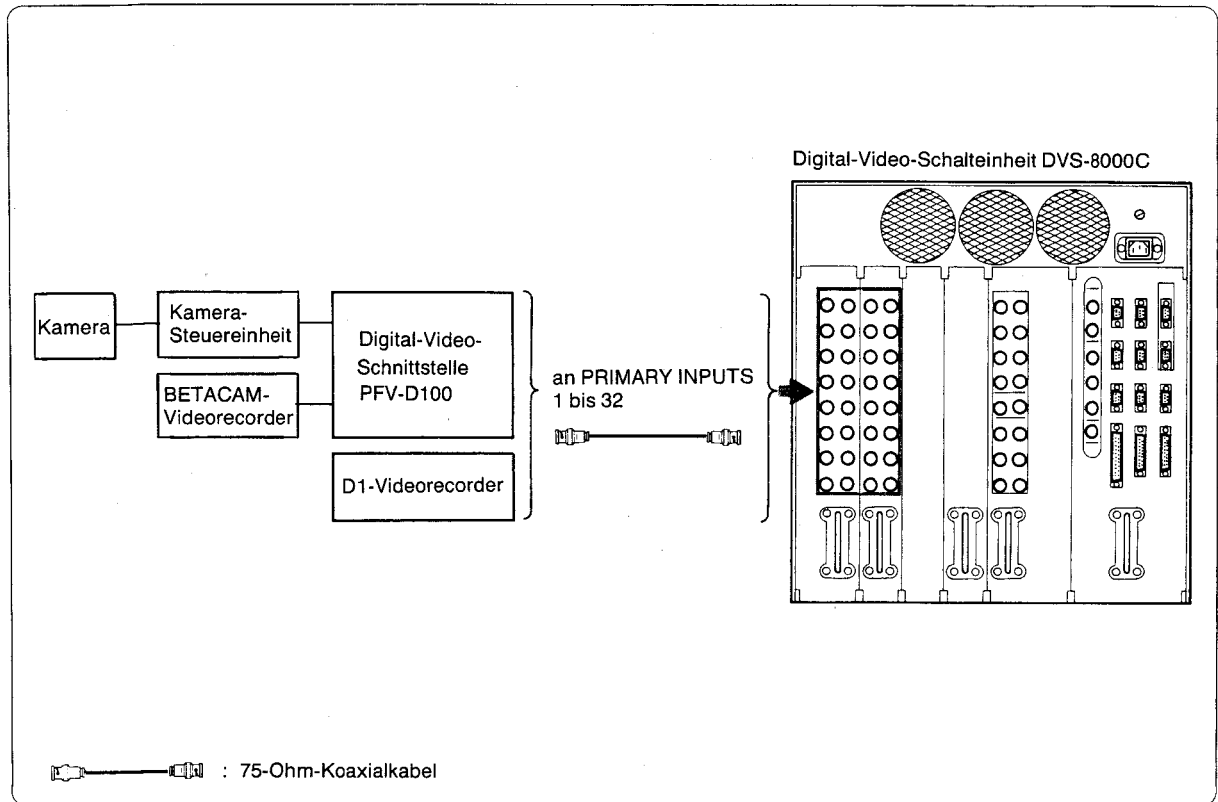
1-3-1. Anschließen des Steuerpultes



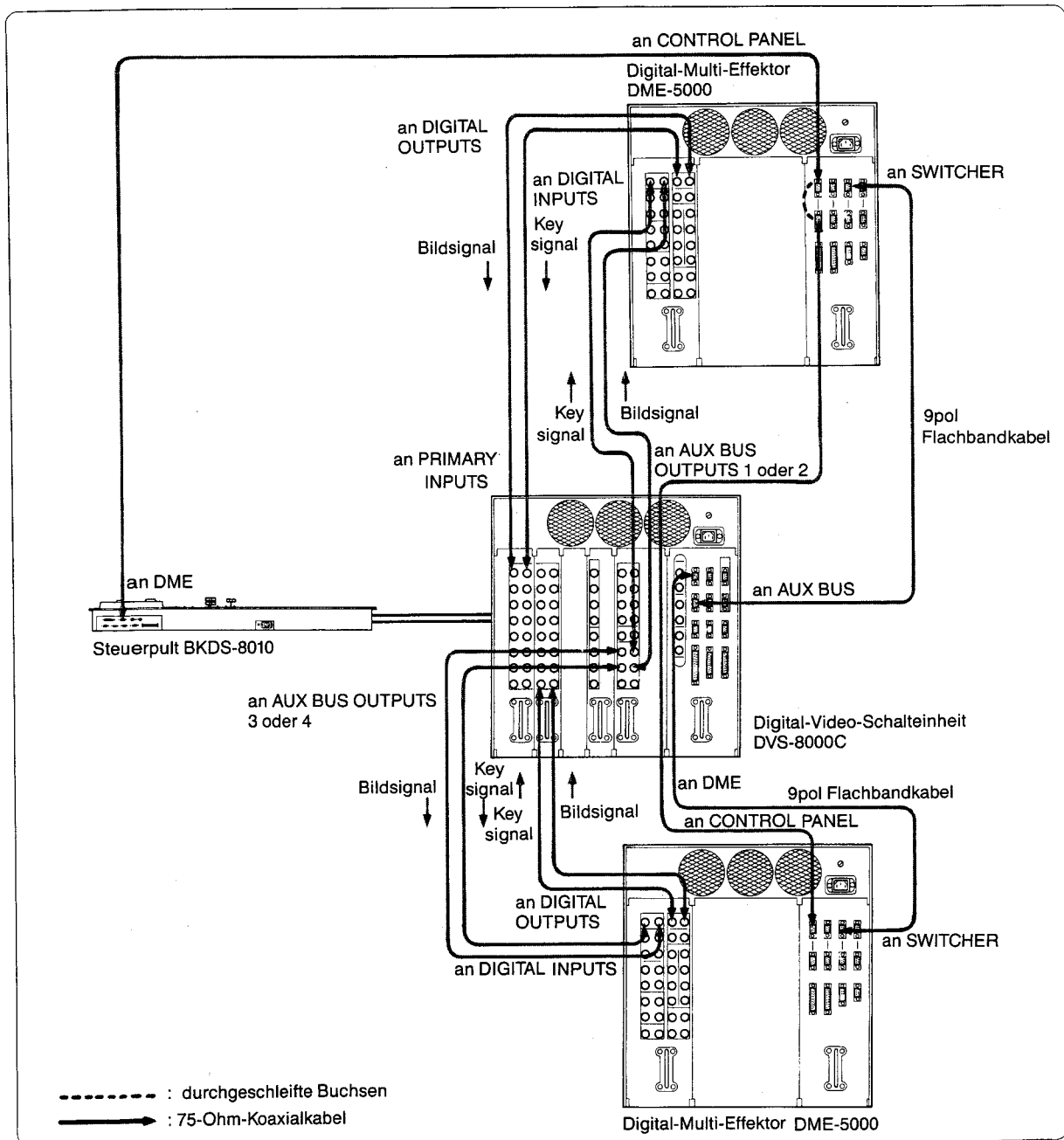
1-3-2. Belegen der Primär-Eingänge und Monitorbuchsen



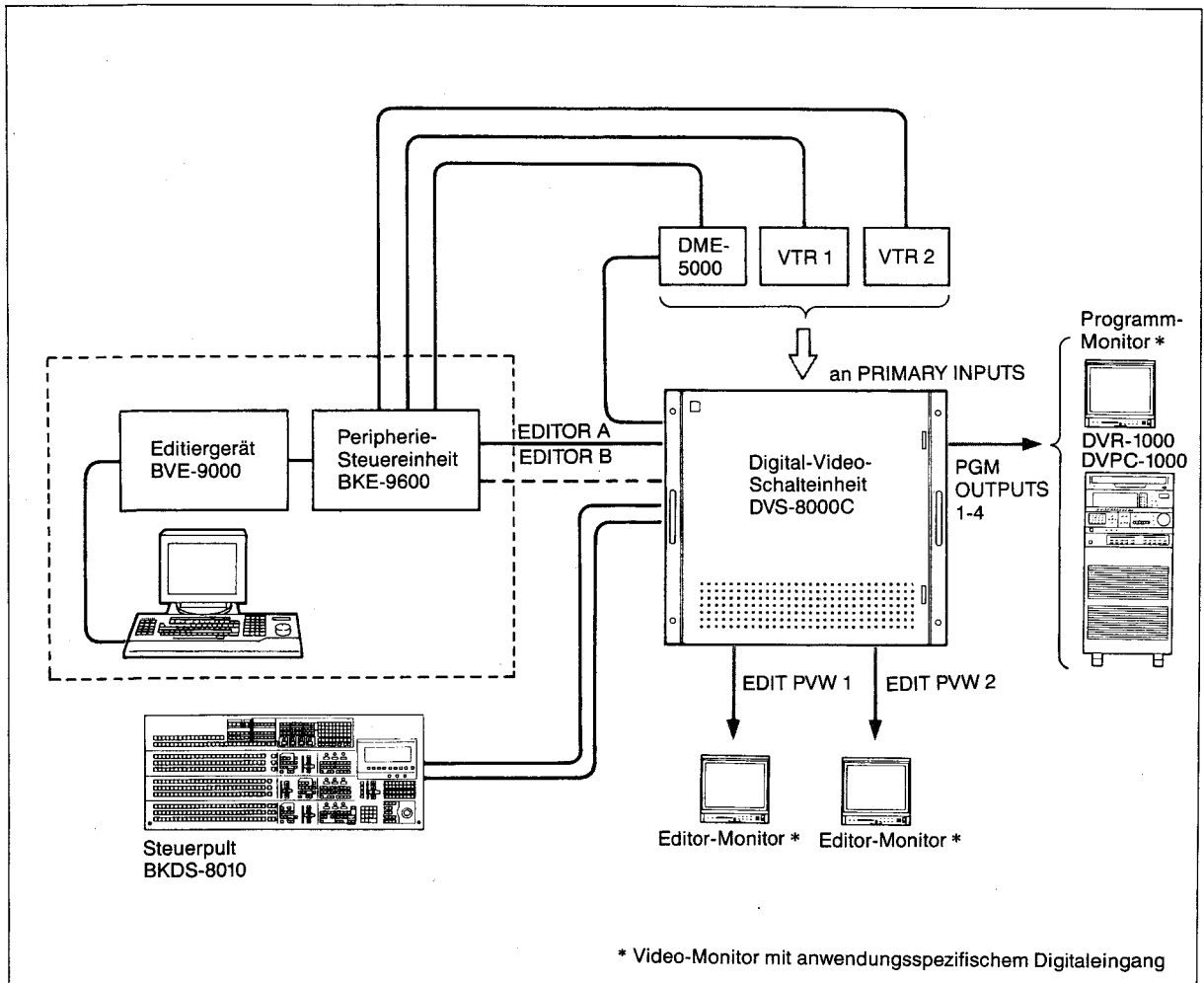
1-3-3. Anschließen externer Chroma-Key-Zuspielgeräte



1-3-4. Anschließen des Digital-Multi-Effektors DME-5000



1-3-5. Anschließen des Editiergeräts BVE-9000



1-4. Technische Daten

Allgemeines

Stromversorgung	90 bis 264 V Wechselspannung, 50/60 Hz
Leistungsaufnahme	maximal 300 W
Umgebungstemperatur	störungsfreier Betrieb: 5 °C bis 40 °C spezifizierte Ergebnisse: 10 °C bis 35 °C
Abmessungen (B x H x T, ohne Vorsprünge)	ca. 424 x 443 x 450 mm
Gewicht	ca. 50 kg

Eingänge/Ausgänge

PRIMARY INPUTS	serielle Digitalsignale (32 BNC-Buchsen) Pegel: 800 mV \pm 10 %, 75 Ohm Rückführverlust: 15 dB (5 bis 270 MHz)
MONITOR OUT	Analog-Videosignal (Y, B-Y, R-Y), 3 BNC-Buchsen Video-Bandbreite: bis 5,0 MHz \pm 0,5 dB (Y) bis 2,0 MHz \pm 0,5 dB (B-Y, R-Y)
REF INPUT	Analog-Synchronisationssignal, 2 BNC-Buchsen, durchgeschleift Pegel: 0,2 bis 5,0 V
REF OUTPUT	Analog-Synchronisationssignal, 1 BNC-Buchse Pegel: Synch: 2 V \pm 20 mV Phaseneinstellung: \pm 1 H System-Phaseneinstellung: +0,5 H bis 1,0 H
ME-1 OUTPUT PGM/PVW	serielles Digital-Videosignal, 2 BNC-Buchsen, 75 Ohm Pegel: 800 mV \pm 10 % Übertragungsrate: 270 Mbps
ME-2 OUTPUT PGM/PVW	serielles Digital-Videosignal, 2 BNC-Buchsen, 75 Ohm Pegel: 800 mV \pm 10 % Übertragungsrate: 270 Mbps
PGM OUTPUTS	serielles Digital-Videosignal, 4 BNC-Buchsen, 75 Ohm Pegel: 800 mV \pm 10 % Übertragungsrate: 270 Mbps
PVW OUTPUTS	serielles Digital-Videosignal, 1 BNC-Buchse, 75 Ohm Pegel: 800 mV, \pm 10 % Übertragungsrate: 270 Mbps
CLEAN OUTPUT	serielles Digital-Videosignal, 1 BNC-Buchse, 75 Ohm Pegel: 800 mV \pm 10 % Übertragungsrate: 270 Mbps
AUX BUS OUTPUTS	serielles Digital-Videosignal, 4 BNC-Buchsen, 75 Ohm Pegel: 800 mV \pm 10 % Übertragungsrate: 270 Mbps
EDIT PVW OUTPUT 1/2	serielles Digital-Videosignal, 2 BNC-Buchsen, 75 Ohm Pegel: 800 mV \pm 10 % Übertragungsrate: 270 Mbps
AC IN	ein 3pol Netzstecker

Steuersignale

CONTROL PANEL (CONTROL)

RS-422A-Schnittstelle, 9pol D-SUB-Buchse

CONTROL PANEL (FDD)

RS-422A-Schnittstelle, 9pol D-SUB-Buchse

EDITOR A

RS-422A-Schnittstelle, 9pol D-SUB-Buchse

EDITOR B

RS-422A-Schnittstelle, 9pol D-SUB-Buchse

DME

RS-422A-Schnittstelle, 9pol D-SUB-Buchse

AUX BUS

RS-422A-Schnittstelle, 9pol D-SUB-Buchse

MATRIX

RS-422A-Schnittstelle, 9pol D-SUB-Buchse

USER

RS-422A-Schnittstelle, 9pol D-SUB-Buchse

TERMINAL

RS-422A-Schnittstelle, 25pol D-SUB-Buchse

GPI

8 TTL-Eingänge

7 relaisgetriebene Ausgänge (maximal AC/DC 30 V, 0,1 A*)

25pol D-SUB-Buchse

TALLY 7

relaisgetriebene Ausgänge (maximal AC/DC 30 V, 0,1 A*)

50pol D-SUB-Buchse

* für Ohmsche Lasten

Standardzubehör

Regalaufnahmen (an Schalteinheit montiert) (1 Satz)

Erweiterungskarte (EX-209) (1)

Netzkabel (3)

2pol Adapter für Netzkabelstecker (1)

75-Ohm-Abschlußwiderstand (1)

Bedienungs- und Wartungsanleitung (1)

Sonderzubehör

Steuerpult BKDS-8010

Chroma-Key-Karte BKDS-8031

Bildspeicher-Karte BKDS-8041

Ersatz-Netzteil BKDS-8090

Systemkomponenten

Digital-Multi-Effektor DME-5000/9000

DME-5000-Steuerpult BKDM-5070

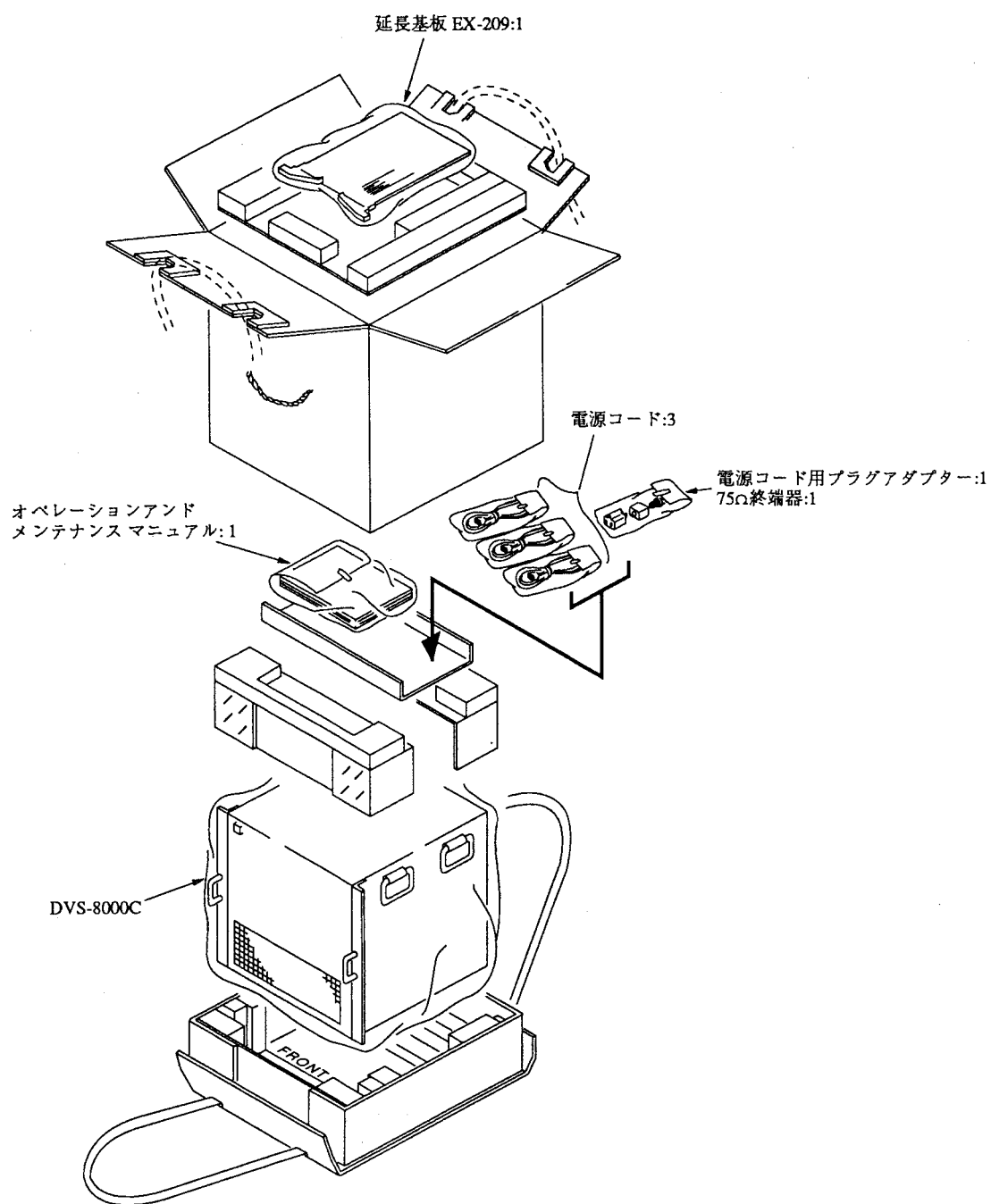
DME-9000-Steuereinheit BKDM-9010

Editiergerät BVE-9000

Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.

第2章 設置

2-1. 開梱と再梱包



2-2. 使用環境

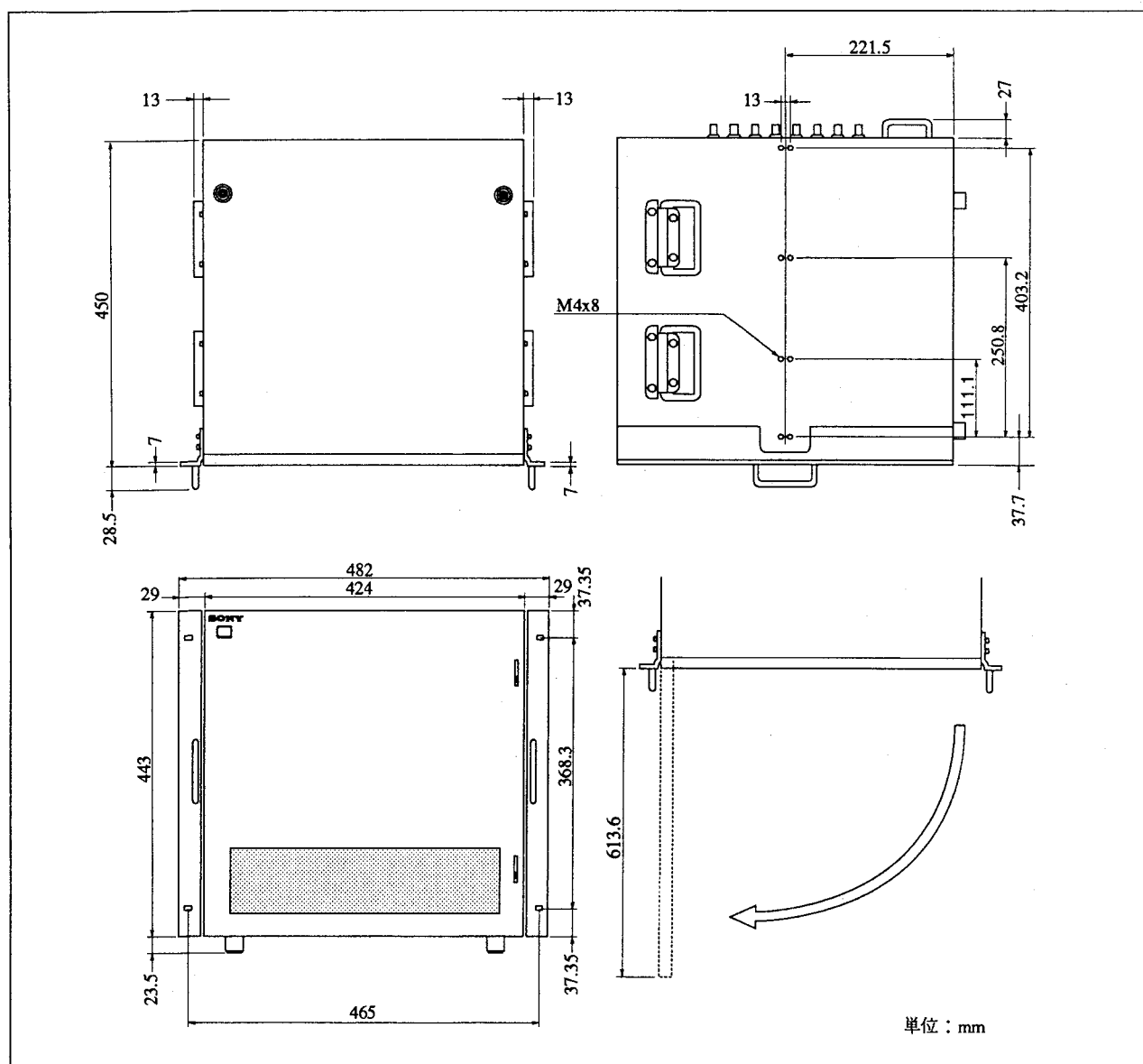
- セット内の温度上昇を防止するために、設置する場所の空気の循環には充分注意して下さい。また、外筐の通風孔を決して覆わないようにして下さい。
- セットの動作環境温度は5℃～40℃ですので、セットを熱源のそばに設置しないで下さい。

2-3. 外形寸法

- セットの外形寸法は図の通りです。
- セット後方はサービス性の点から壁などから最低20 cm離して下さい。

2-4. 電源電圧

- DVS-8000Cの電源にはスイッチングレギュレーターを使用しており、90 V～264 V用に設計されています。このため、90 V～264 Vの間は電源電圧を変更することなく使用できます。

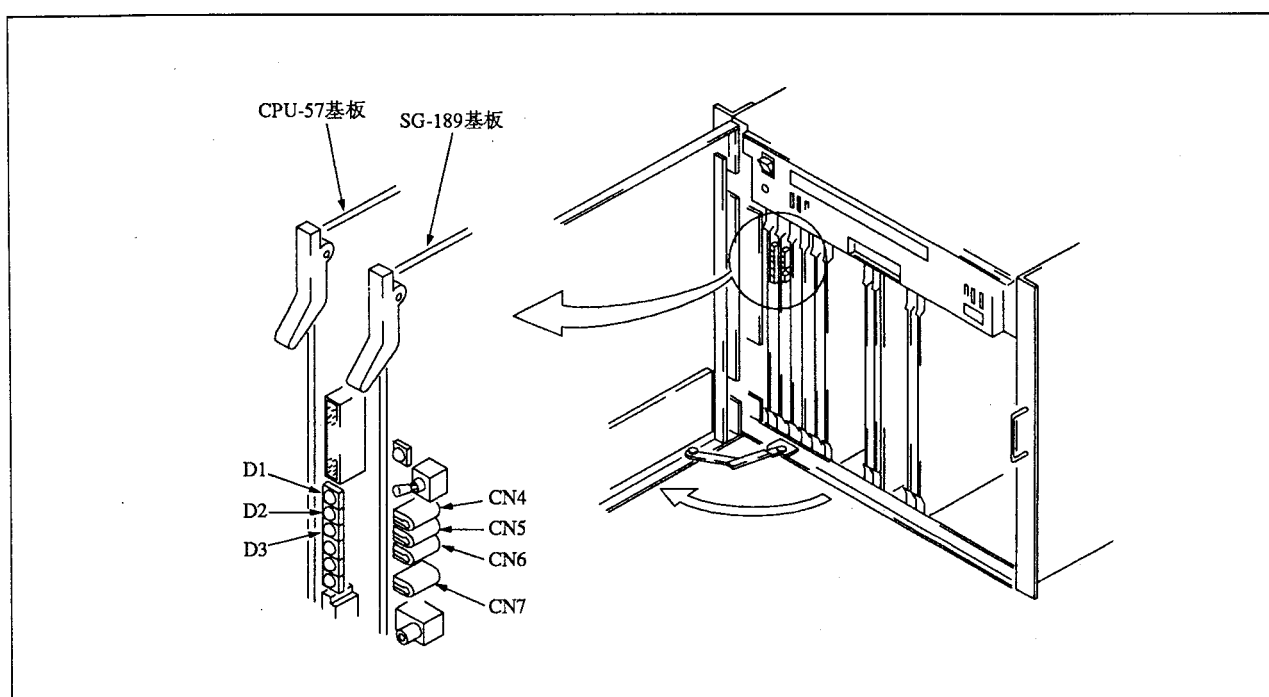


2-5. 設置時の確認と調整

2-5-1. 電源電圧の設定

設置後、セット内部の電源電圧を確認して下さい。

- (1) フロントパネルを開き、電源ユニットが正しく挿入されユニット前面部の矢印が指し示している4本のネジ (+PWH 4×8) で固定されているか確認して下さい。
- (2) 電源をオンにし、CPU-57基板の電源表示ランプ (D1, D2, D3) が全て点灯しているか確認して下さい。



- (3) SG-189基板の ± 5 Vテスト端子 (CN4, CN5, CN6) とGNDテスト端子 (CN7) にデジタル電圧計を接続し、各テスト端子の電圧値が下表の規格と合致しているか確認して下さい。

測定端子	目 的	規 格
CN4 (+5 V) \leftrightarrow CN7 (GND)	スロット番号1-9のDC電圧 (+5 V) の測定	+5.1 V \pm 0.02 V
CN5 (+5 V) \leftrightarrow CN7 (GND)	スロット番号10-18のDC電圧 (+5 V) の測定	+5.1 V \pm 0.02 V
CN6 (-5 V) \leftrightarrow CN7 (GND)	全スロットのDC電圧 (-5 V) の測定	-5.1 V \pm 0.02 V

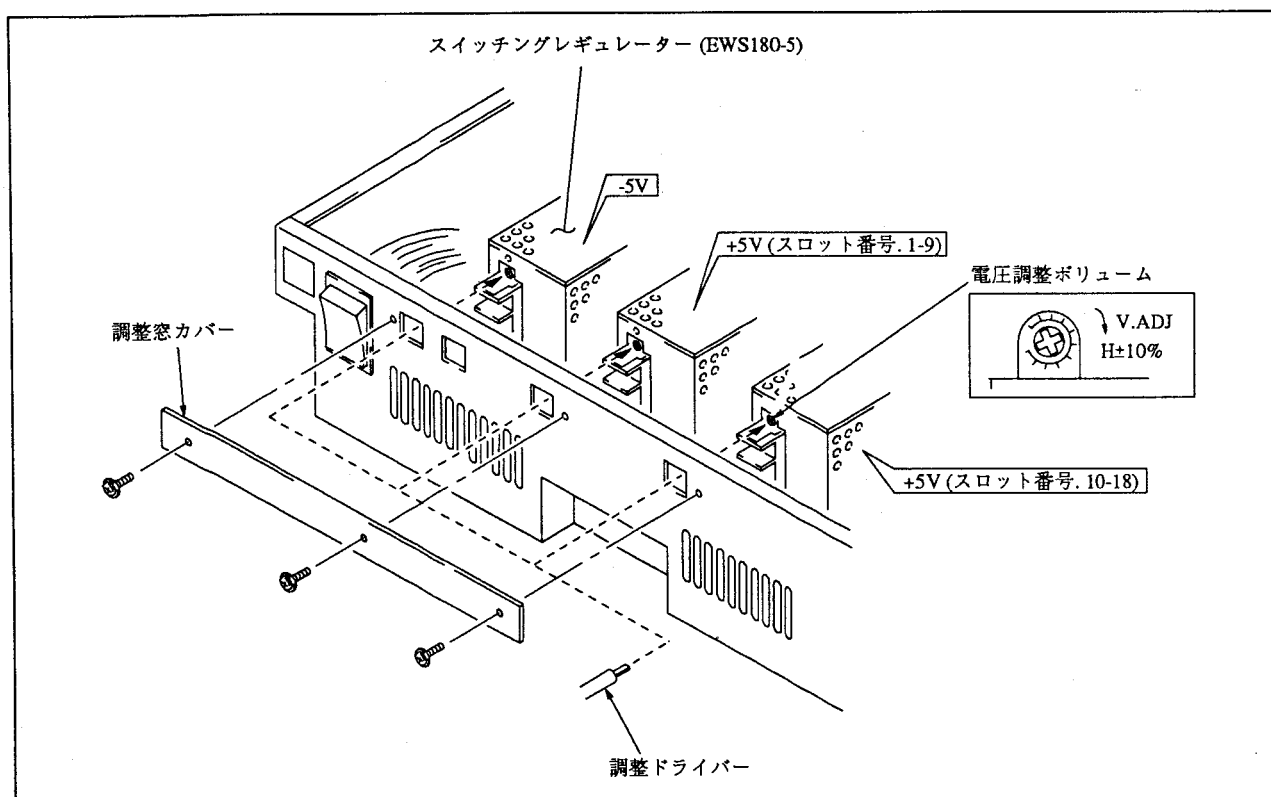
- 規格に入らない場合は、下記の手順に従って電圧調整を行なって下さい。

(デジタル電圧計はテスト端子に接続したまま調整を行ないます)

STEP 1. 電源ユニットの調整窓カバーを外して下さい。

STEP 2. 調整窓から調整ドライバーを差し込み、該当するスイッチングレギュレーターの電圧調整ボリュームを回します。

デジタル電圧計を見ながら、適正な電圧値が得られるまで調整して下さい。

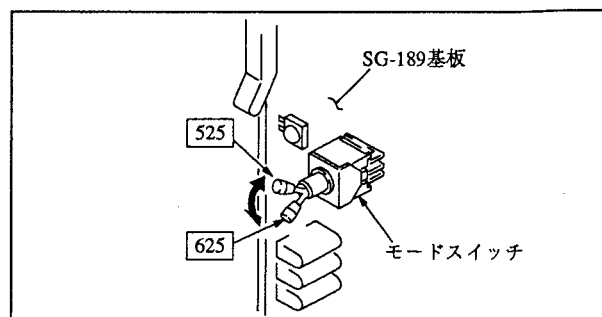


<注意>

- (1) 電源電圧の設定は、全てのカード基板を挿入した状態で行なって下さい。(オプション基板を含む)
- (2) カード基板の入れ替え等を行なった場合、必ず電源電圧を再確認して下さい。
- (3) オプションのスペア電源ユニットBKDS-8090をお買い求めになった場合は、あらかじめ電源電圧の設定を行なっておくと便利です。
- (4) 電源電圧の調整ボリュームとテスト端子の組み合わせが適正であるよう十分ご注意下さい。

2-5-2. EIA525ライン/CCIR625ライン方式の設定

- SG-189基板上のモードスイッチを操作して、システムに適したライン方式に設定して下さい。

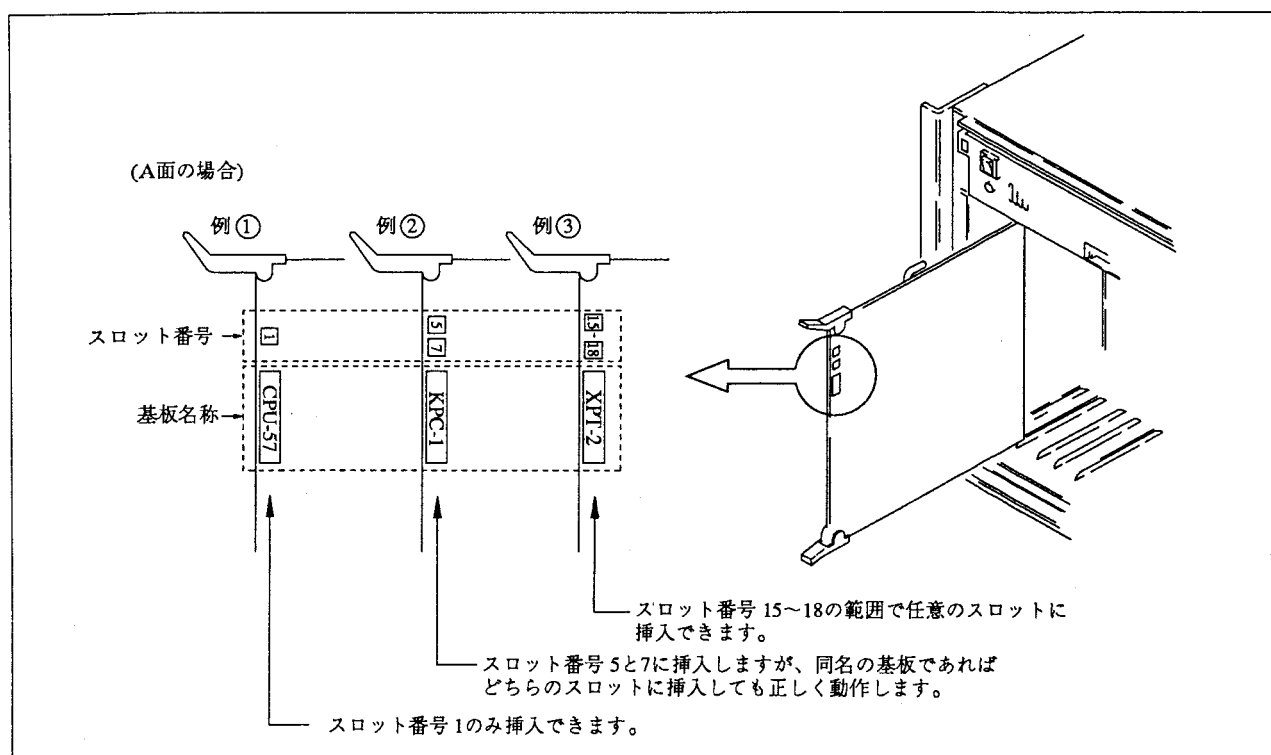


2-5-3. カード基板の設置方法

- DVS-8000Cは、基板ごとに設置すべきスロットが定められています。下記に従って、各基板が所定のスロットに正しく設置されているか確認して下さい。

スロット番号	基板名	スロット番号	基板名
1	CPU-57	9	MIX-6 (A)
2	SG-189	10	OUT-2
3	WKG-5	11 & 12	BKDS-8031 (オプション基板/2枚組)
4	WKG-4	13	MAT-2
5 & 7	KPC-1 (2枚組)	14	BKDS-8041 (オプション基板)
6 & 8	MIX-4 (A) (2枚組)	15~18	XPT-2

- 基板の扉側上端部には、A面、B面の両方に基板名称とその基板を設置できるスロット番号が表示されています。



- DVS-8000Cは、BK基板(オプション)の選択により、様々なシステムへの対応や機能の拡張が可能です。各BK基板も本体基板と同様、扉側上端部にあるスロット番号の表示に従って、定められた範囲および順序で設置して下さい。

<注意>

- (1) 各基板のコネクターがゆるみなく本体のMB-393基板に接続しているか確認して下さい。
- (2) 設置の順序をまちがえるとシステムエラーとなり、正しく作動しません。
- (3) BK基板を追加した場合は、必ず電源電圧を再確認して下さい。

2-6. 接続コネクタ

設置時、サービス時等において、コネクタパネル部の各種コネクタにケーブルを接続する際には、下記のコネクタ またはその同等品を接続して下さい。

コネクタパネル部の コネクタの機能名称	接続するケーブル側の コネクタの部品番号及び名称
CONTROL PANEL (CONTROL FDD) EDITOR A EDITOR B DME AUX BUS SPARE MATRIX USER	D-SUB 9 PIN (Male) PLUG 1-560-651-00 SHELL 1-561-749-00
TERMINAL GPI	D-SUB 25 PIN (Male) PLUG 1-566-356-00 (*1) SHELL 1-563-377-00
TALLY	D-SUB 50 PIN (Male) PLUG 1-566-358-00 (*1) SHELL 1-563-379-00
REF INPUT MONITOR OUTPUT (Y, B-Y, R-Y) REF OUTPUT ME-1 OUTPUTS ME-2 OUTPUTS PGM OUTPUTS CLEAN OUTPUT PVW OUTPUT AUX BUS OUTPUTS EDIT PVW OUTPUTS PRIMARY INPUTS	BNC同軸コネクタプラグ
AC IN	MAIN POWER SUPPLY CABLE (DVS-8000Cに付属)

(*1)・・・PLUGには、次のような圧着用コネクタが必要です。

AWG #18～#22: 1-566-493-00

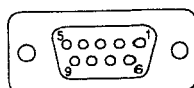
AWG #22～#24: 1-564-774-00

AWG #24～#30: 1-564-775-00

2-7. コネクタの入出力信号

コネクタパネル部のコネクタの入出力信号は次の通りです。

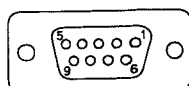
- CONTROL PANEL [CONTROL] : RS-422A (D-SUB 9 PIN)



PIN No.	信号名	機能
1	GND	フレームグランド
2	CON TX-A	DVS-8000CからCONTROL PANEL (*1) への送信データ (-)
3	CON RX-B	CONTROL PANELからDVS-8000Cへの受信データ (+)
4	GND	CONTROL PANELからDVS-8000Cへの共通グランド
5	—	スベア
6	GND	DVS-8000CからCONTROL PANELへの共通グランド
7	CON TX-B	DVS-8000CからCONTROL PANELへの送信データ (+)
8	CON RX-A	CONTROL PANELからDVS-8000Cへの受信データ (-)
9	GND	フレームグランド

(*1) . . . CONTROL PANEL BKDS-8010など

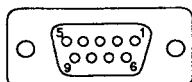
- CONTROL PANEL [FDD] : RS-422A (D-SUB 9 PIN)



PIN No.	信号名	機能
1	GND	フレームグランド
2	FDD TX-A	DVS-8000CからFDD (*2) への送信データ (-)
3	FDD RX-B	FDDからDVS-8000Cへの受信データ (+)
4	GND	FDDからDVS-8000Cへの共通グランド
5	—	スベア
6	GND	DVS-8000CからFDDへの共通グランド
7	FDD TX-B	DVS-8000CからFDDへの送信データ (+)
8	FDD RX-A	FDDからDVS-8000Cへの受信データ (-)
9	GND	フレームグランド

(*2) . . . BKDS-8010に付属のFDDなど

• EDITOR A : RS-422A (D-SUB 9 PIN)

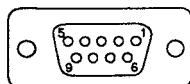


-EXT VIEW-

PIN No.	信号名	機能
1	GND	フレームグラウンド
2	EDT A TX-A	DVS-8000CからEDITOR (*3) への送信データ (-)
3	EDT A RX-B	EDITORからDVS-8000Cへの受信データ (+)
4	GND	EDITORからDVS-8000Cへの共通グラウンド
5	—	スベア
6	GND	DVS-8000CからEDITORへの共通グラウンド
7	EDT A TX-B	DVS-8000CからEDITORへの送信データ (+)
8	EDT A RX-A	EDITORからDVS-8000Cへの受信データ (-)
9	GND	フレームグラウンド

(*3) . . . EDITING CONTROL UNIT BVE-9000など

• EDITOR B : RS-422A (D-SUB 9 PIN)

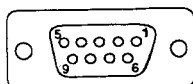


-EXT VIEW-

PIN No.	信号名	機能
1	GND	フレームグラウンド
2	EDT B TX-A	DVS-8000CからEDITOR (*4) への送信データ (-)
3	EDT B RX-B	EDITORからDVS-8000Cへの受信データ (+)
4	GND	EDITORからDVS-8000Cへの共通グラウンド
5	—	スベア
6	GND	DVS-8000CからEDITORへの共通グラウンド
7	EDT B TX-B	DVS-8000CからEDITORへの送信データ (+)
8	EDT B RX-A	EDITORからDVS-8000Cへの受信データ (-)
9	GND	フレームグラウンド

(*4) . . . BVE-9000など

• DME : RS-422A (D-SUB 9 PIN)

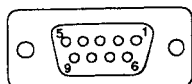


-EXT VIEW-

PIN No.	信号名	機能
1	GND	フレームグラウンド
2	DME TX-A	DVS-8000CからDME (*5) への送信データ (-)
3	DME RX-B	DMEからDVS-8000Cへの受信データ (+)
4	GND	DMEからDVS-8000Cへの共通グラウンド
5	———	スベア
6	GND	DVS-8000CからDMEへの共通グラウンド
7	DME TX-B	DVS-8000CからDMEへの送信データ (+)
8	DME RX-A	DMEからDVS-8000Cへの受信データ (-)
9	GND	フレームグラウンド

(*5) . . . DIGITAL MULTI EFFECTS DME-5000など

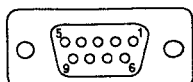
• AUX BUS (REMOTE) : RS-422A (D-SUB 9 PIN)



-EXT VIEW-

PIN No.	信号名	機能
1	GND	フレームグラウンド
2	AUX TX-A	DVS-8000CからAUX BUS REMOTEへの送信データ (-)
3	AUX RX-B	AUX BUS REMOTEからDVS-8000Cへの受信データ (+)
4	GND	AUX BUS REMOTEからDVS-8000Cへの共通グラウンド
5	———	スベア
6	GND	DVS-8000CからAUX BUS REMOTEへの共通グラウンド
7	AUX TX-B	DVS-8000CからAUX BUS REMOTEへの送信データ (+)
8	AUX RX-A	AUX BUS REMOTEからDVS-8000Cへの受信データ (-)
9	GND	フレームグラウンド

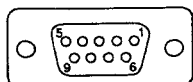
• SPARE : RS-422A (D-SUB 9 PIN)



-EXT VIEW-

PIN No.	信号名	機能
1	GND	フレームグラウンド
2	SPARE D1 (-)	DVS-8000Cからの送(受)信データ (-)
3	SPARE D2 (+)	DVS-8000Cへの受(送)信データ (+)
4	GND	DVS-8000Cへの共通グラウンド
5	———	スベア
6	GND	DVS-8000Cからの共通グラウンド
7	SPARE D1 (+)	DVS-8000Cからの送(受)信データ (+)
8	SPARE D2 (-)	DVS-8000Cへの受(送)信データ (-)
9	GND	フレームグラウンド

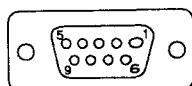
• MATRIX (SWITCHER) : RS-422A (D-SUB 9 PIN)



-EXT VIEW-

PIN No.	信号名	機能
1	GND	フレームグラウンド
2	MTX RX-A	MATRIX SWITCHERからDVS-8000Cへの受信データ (-)
3	MTX TX-B	DVS-8000CからMATRIX SWITCHERへの送信データ (+)
4	GND	DVS-8000CからMATRIX SWITCHERへの共通グラウンド
5	———	スベア
6	GND	MATRIX SWITCHERからDVS-8000Cへの共通グラウンド
7	MTX RX-B	MATRIX SWITCHERからDVS-8000Cへの受信データ (+)
8	MTX TX-A	DVS-8000CからMATRIX SWITCHERへの送信データ (-)
9	GND	フレームグラウンド

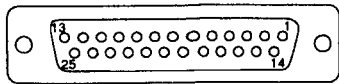
• USER : RS-422A (D-SUB 9 PIN)



-EXT VIEW-

PIN No.	信号名	機能
1	GND	フレームグラウンド
2	USER D1 (-)	DVS-8000Cからの送(受)信データ (-)
3	USER D2 (+)	DVS-8000Cへの受(送)信データ (+)
4	GND	DVS-8000Cへの共通グラウンド
5	—	スペア
6	GND	DVS-8000Cからの共通グラウンド
7	USER D1 (+)	DVS-8000Cからの送(受)信データ (+)
8	USER D2 (-)	DVS-8000Cへの受(送)信データ (-)
9	GND	フレームグラウンド

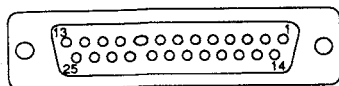
• TERMINAL : RS-232C (D-SUB 25 PIN)



—EXT VIEW—

PIN No.	信号名	機能
1	GND	フレームグラウンド
2	RXD	受信データ
3	TXD	送信データ
4	CTS	送信許可
5	RTS	送信要求
6	—	NC
7	GND	グラウンド
8	—	NC
9	—	
10	—	
11	—	
12	—	
13	—	
14	—	
15	—	
16	—	
17	—	
18	—	
19	—	
20	—	
21	—	
22	—	
23	—	
24	—	
25	—	

- GPI : (D-SUB 25 PIN) INPUT×8, TTL
OUTPUT×7, リレー接点 30 V 100 mA (抵抗負荷の場合)

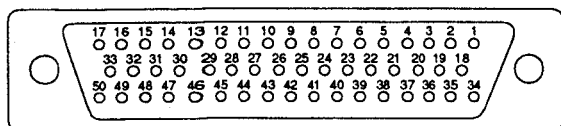


—EXT VIEW—

PIN No.	信号名	機能
1	GND	グラウンド
2	GND	グラウンド
3	GPI IN 2	汎用入力
4	GPI IN 4	
5	GPI IN 6	
6	GPI IN 8	
7	GPI OUT 1B	汎用出力
8	GPI OUT 2B	
9	GPI OUT 3B	
10	GPI OUT 4B	
11	GPI OUT 5B	
12	GPI OUT 6B	
13	GPI OUT 7B	
14	GND	グラウンド
15	GPI IN 1	汎用入力
16	GPI IN 3	
17	GPI IN 5	
18	GPI IN 7	
19	GPI OUT 1A	汎用出力
20	GPI OUT 2A	
21	GPI OUT 3A	
22	GPI OUT 4A	
23	GPI OUT 5A	
24	GPI OUT 6A	
25	GPI OUT 7A	

※ 同一番号のAとBが1組のリレー接点となっています。

• TALLY : (D-SUB 50 PIN) OUTPUT×7, リレー接点 30 V 100 mA (抵抗負荷の場合)



PIN No.	信号名	機能
1	TALLY COM	} コモン出力
2	TALLY COM	
3	TALLY COM	
4	TALLY 3	} プライマリタリール出力
5	TALLY 6	
6	TALLY 9	
7	TALLY 12	
8	TALLY 15	
9	TALLY 18	
10	TALLY 21	
11	TALLY 24	
12	TALLY 27	
13	TALLY 30	
14	———	NC
15	———	NC
16	———	NC
17	———	NC
18	TALLY COM	} コモン出力
19	TALLY COM	
20	TALLY 2	} プライマリタリール出力
21	TALLY 5	
22	TALLY 8	
23	TALLY 11	
24	TALLY 14	
25	TALLY 17	

PIN No.	信号名	機能
26	TALLY 20	} プライマリータリー出力
27	TALLY 23	
28	TALLY 26	
29	TALLY 29	
30	TALLY 32	
31	TALLY ME 2	ME-2 タリー出力
32	TALLY CK 2	クロマキー-2 タリー出力
33	——	NC
34	TALLY COM	} コモン出力
35	TALLY COM	
36	TALLY 1	} プライマリータリー出力
37	TALLY 4	
38	TALLY 7	
39	TALLY 10	
40	TALLY 13	
41	TALLY 16	
42	TALLY 19	
43	TALLY 22	
44	TALLY 25	
45	TALLY 28	
46	TALLY 31	
47	TALLY ME 1	ME-1 タリー出力
48	TALLY CK 1	クロマキー-1 タリー出力
49	——	} NC
50	——	

※ 各タリー出力とコモン出力の間がリレー接点となっています。

- REF INPUT : BNCコネクター, ループスルー付
 ANALOG SYNC 0±3 dB

- REF OUTPUT : BNCコネクター, 75Ω
 ANALOG SYNC 0±3 dB

- MONITOR OUTPUT: BNCコネクター, 75Ω
 [Y], [B-Y], [R-Y] ANALOG 1.0 V_{p-p}±3 dB

- ME-1 OUTPUTS : BNCコネクター, 75Ω
 [PGM], [PVW] SERIAL DIGITAL 800 mV±10%

- ME-2 OUTPUTS : BNCコネクター, 75Ω
 [PGM], [PVW] SERIAL DIGITAL 800 mV±10%

- PGM OUTPUTS : BNCコネクター, 75Ω
 [1]~[4] SERIAL DIGITAL 800 mV±10%

- CLEAN OUTPUT : BNCコネクター, 75Ω
 SERIAL DIGITAL 800 mV±10%

- PVW OUTPUT : BNCコネクター, 75Ω
 SERIAL DIGITAL 800 mV±10%

- AUX BUS OUTPUTS : BNCコネクター, 75Ω
 [1]~[4] SERIAL DIGITAL 800 mV±10%

- EDIT PVW OUTPUTS : BNCコネクター, 75Ω
 [1], [2] SERIAL DIGITAL 800 mV±10%

- PRIMARY INPUTS : BNCコネクター, 75Ω
 [1]~[32] SERIAL DIGITAL 800 mV±10%

2-8. ラックマウントの方法

- DVS-8000Cは19インチ標準ラックに組み込んで使用することができます。この時レールはオプションのラックマウントレールRMM-18DVを必ず使用してください。

<用意するもの>

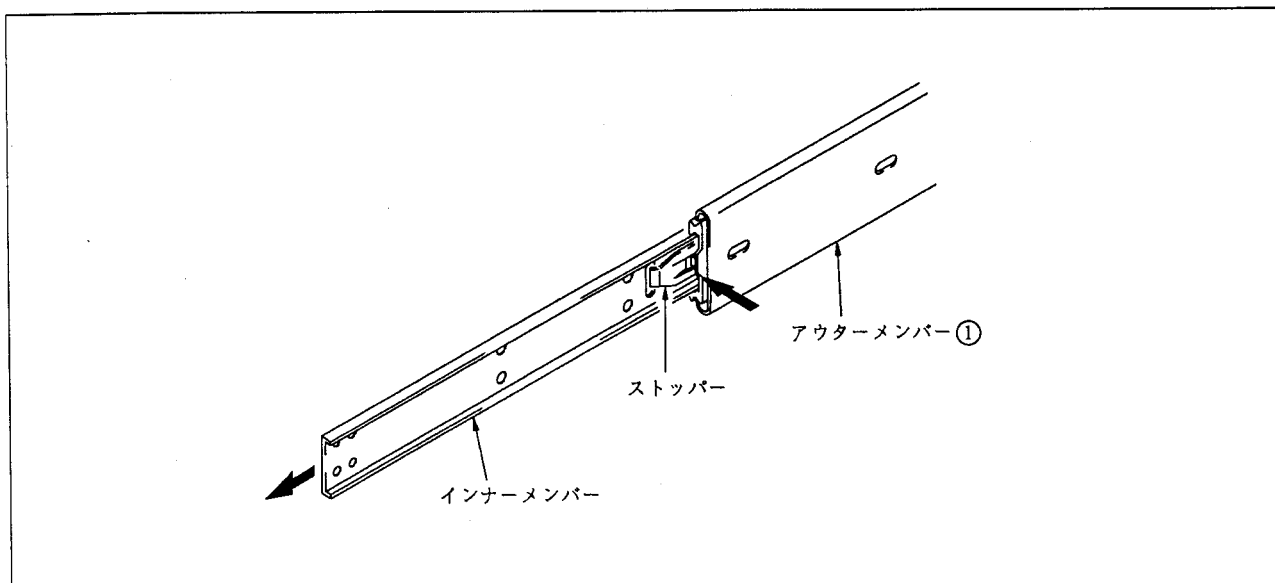
- ラックマウントレール RMM-18DV
 - 板ナット (長) 取り付け用ネジ (+B 4×8) 8本
 - ラックマウント用ネジ (+RK 5×16) 4本
 - ラックマウント用飾りワッシャー 4個
- (ソニー部品番号 2-297-913-01)

<取り付け時の注意>

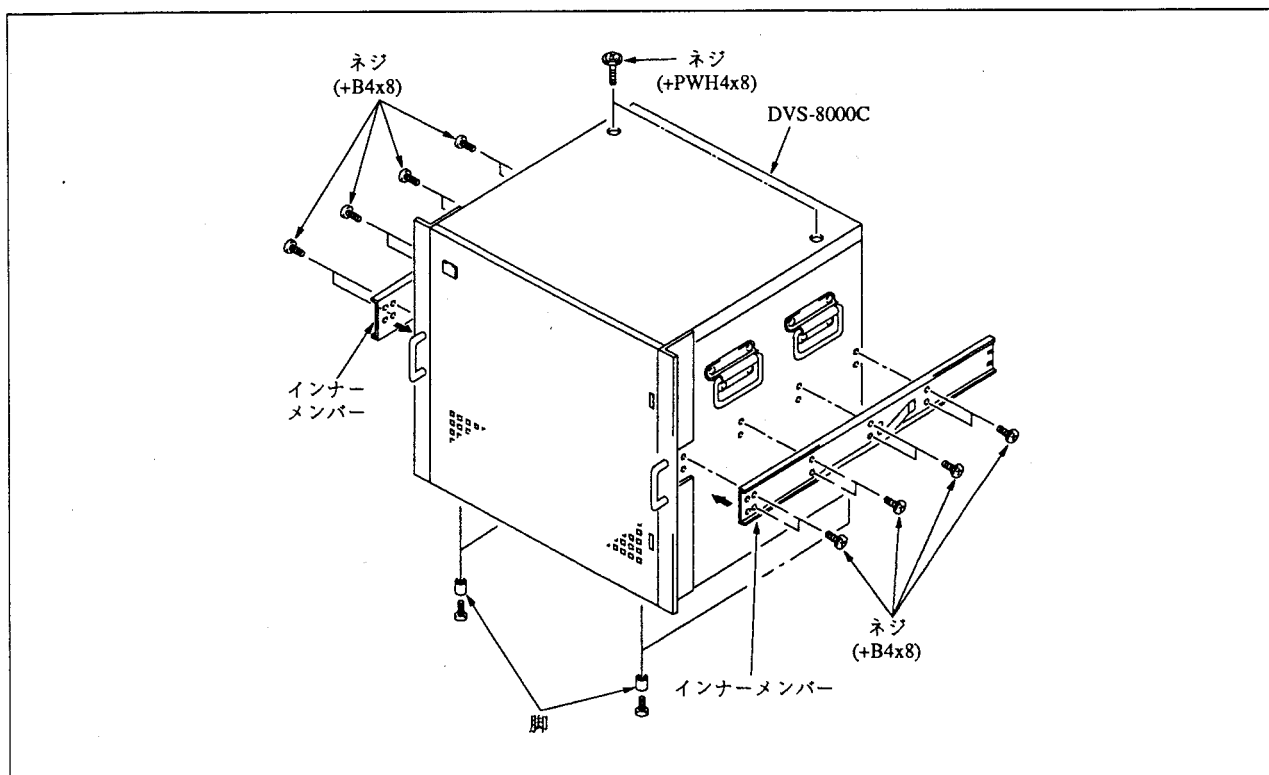
- (1) 19インチ標準ラックにDVS-8000C及び関連機種をラックマウントした時は、ラック内の温度上昇を防止するため、換気用ファンを取り付けることをお勧めします。ラック内の全てのセットが5℃～40℃の範囲で使用できるように注意してください。
- (2) ラックマウントする時は必ず推奨のレールをご使用下さい。ラックアングルだけではセットをラックに完全に固定できないため危険です。
- (3) ラックはしっかりした床にボルトで固定することをお勧めします。セットをラックから引き出す際に倒れかかってくるのを防止できます。
- (4) ラックマウントレールRMM-18DVには付属の設置マニュアルが同梱されていますが、DVRシリーズのVTRをラックマウントするためのマニュアル内容になっています。DVS-8000Cのラックマウントは一部VTRと異なるため、本マニュアルの手順に従って下さい。

<取り付け方法>

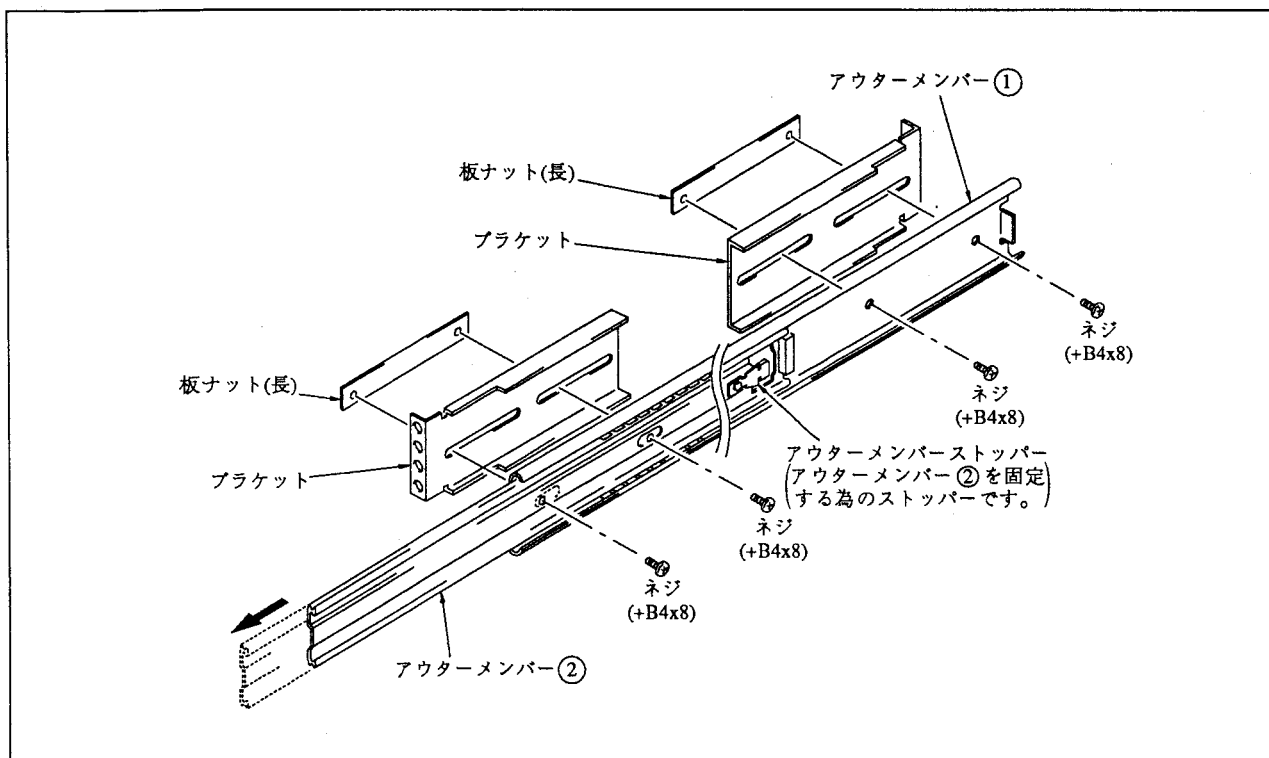
- (1) ラックマウントレールRMM-18DVのストッパーを押しながら、インナーメンバーを引き出します。



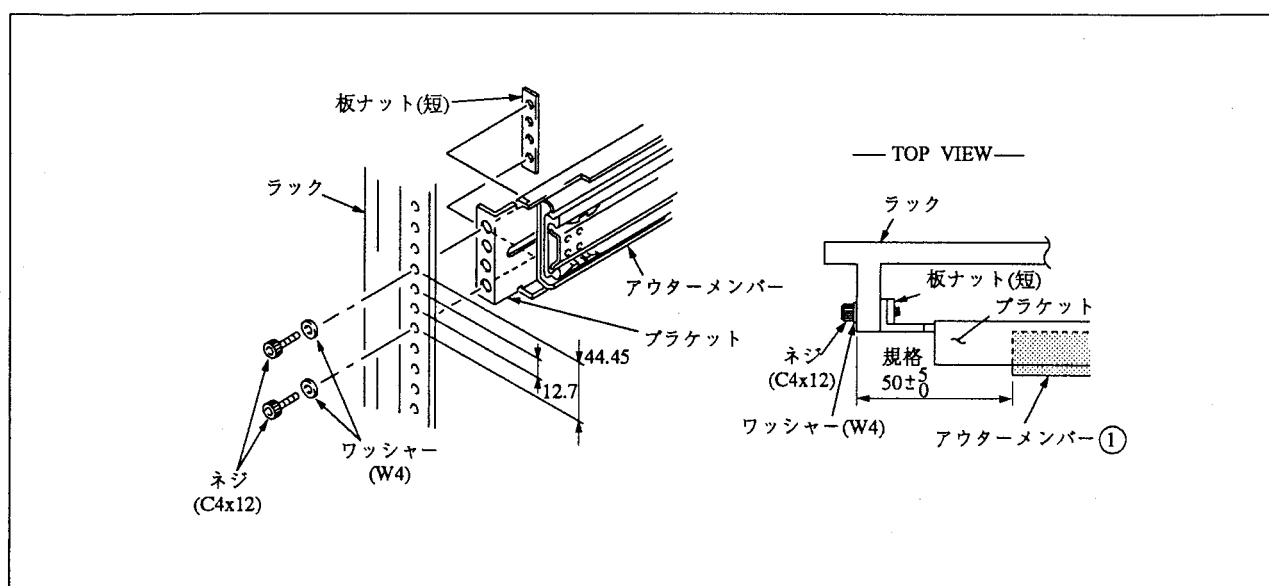
- (2) RMM-18DVに付属のネジ (+B 4×8) 16本を使って、インナーメンバーをセットに取り付けます。
この時、セット上板のネジ (+PWH 4×8) 2本を必ず外して下さい。
また、セットに付いている脚は必要に応じて外して下さい。



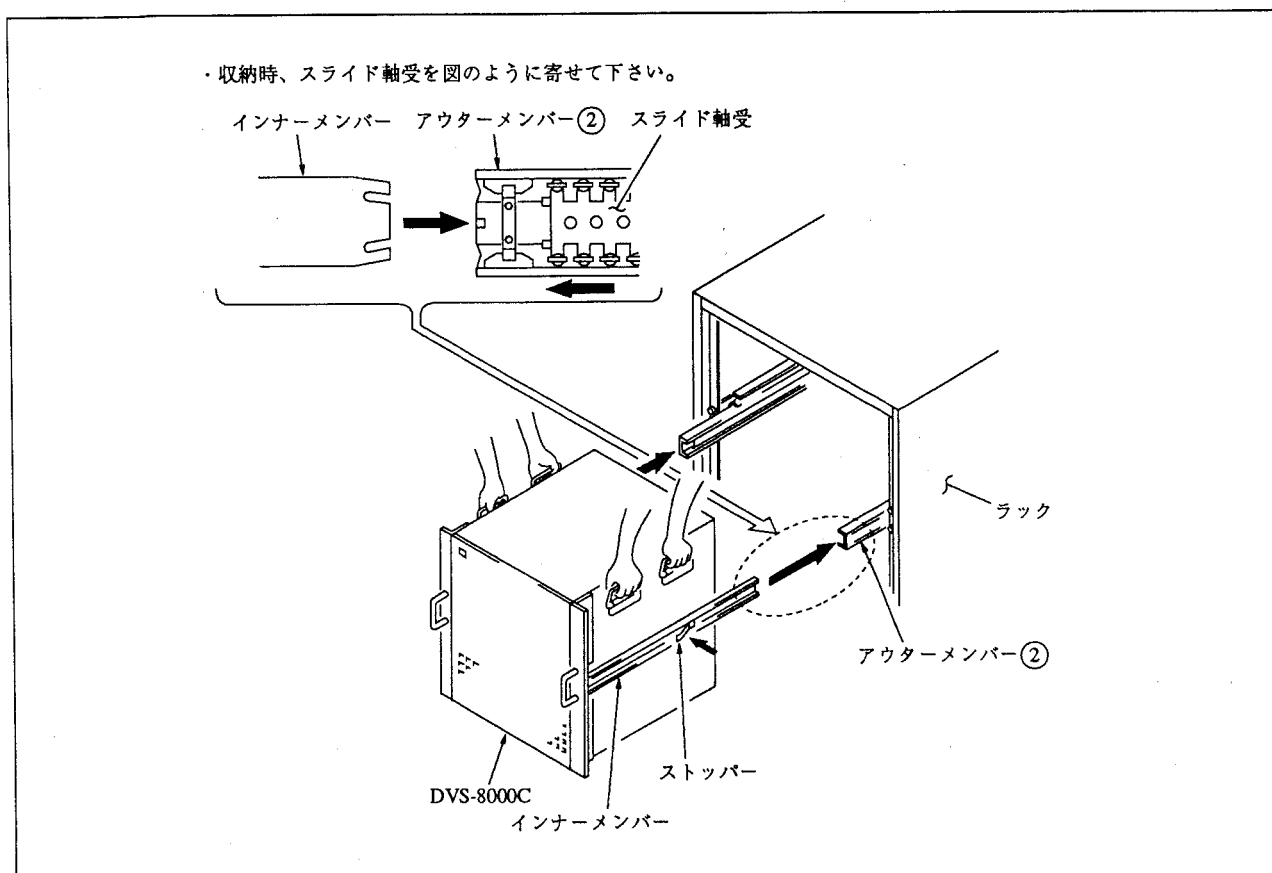
- (3) 用意したネジ (+B 4×8) 8本を使ってアウターメンバー①にブラケットを仮止めします。
 取り付けはアウターメンバー②を前後に動かしてアウターメンバー①のネジ穴が見えるようにして行ないます。



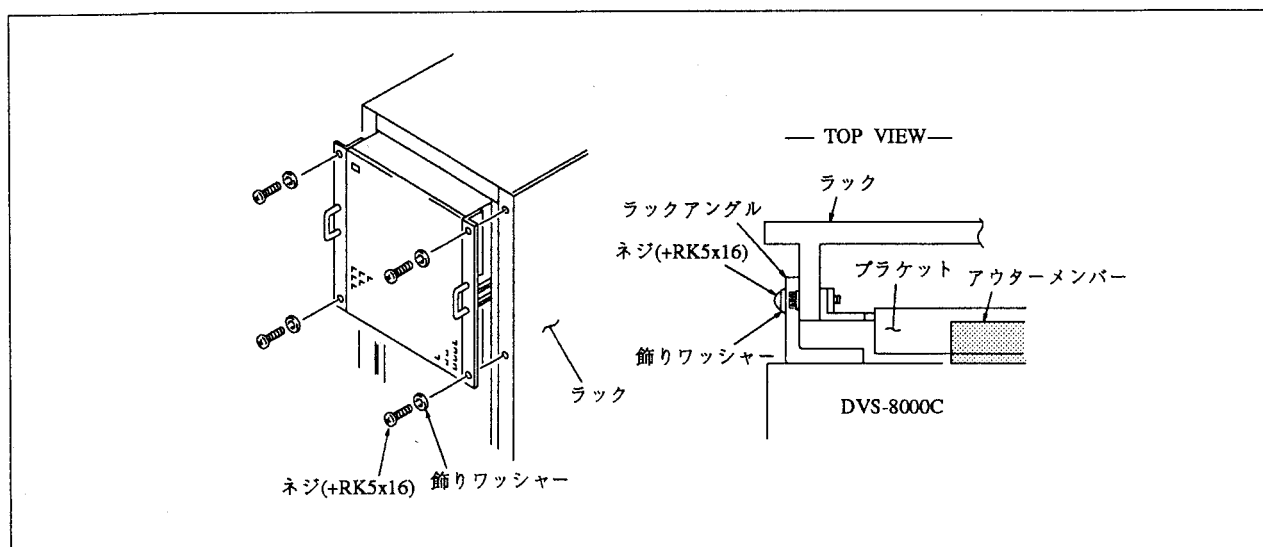
- (4) RMM-18DVに付属のネジ (C 4×12) 4本及びワッシャー (W4) 4枚を使って、アウターメンバー組立をラックに仮止めします。この際、アウターメンバーの取り付け位置を調整します。
 調整後、(3)で仮止めたネジ (+B 4×8) を締め付けます。



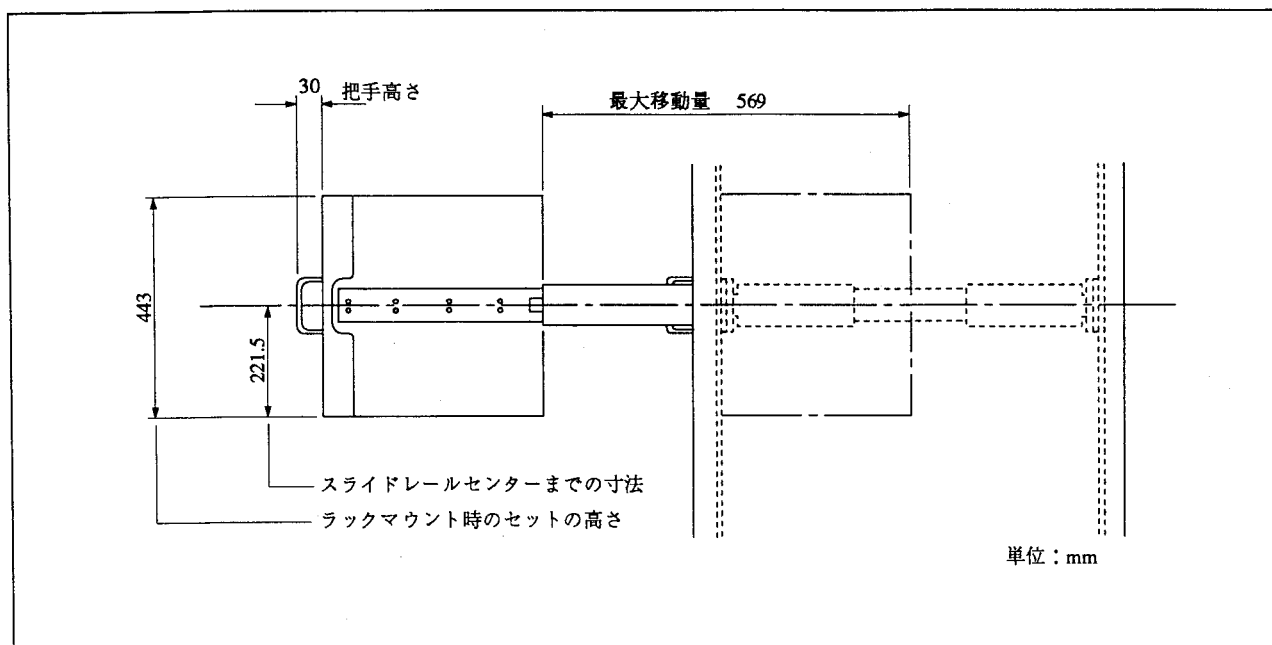
- (5) 収納するときはインナーメンバーのストッパーを解除してください。スムーズに収納できることを確認した後、
(4) で仮止めたネジ (C 4×12) を締め付けます。



- (6) ラックに収納した後、用意したネジ (+RK 5×16) 4本と飾りワッシャー4個を使ってセットをラックに固定して下さい。



- ・DVS-8000Cをラックマウントしたときの最大移動距離は下図の通りです。



2-9. 付属アクセサリ

品名	部品 No.	個数
ラックアングルASSY (*1)	X-3165-221-2	2
延長基板 (EX-209)	A-6279-727-A	1
電源コード (UL, CSA: 125 V/10 A)	1-551-812-11	1
電源コード (UL, CSA: 250 V/10 A)	PENDING	1
電源コード (CEE: 250 V/6 A)	1-556-760-11	1
電源コード用プラグアダプター	1-506-411-21 2-990-242-01	1組
75Ω終端器	1-569-221-11	1
オペレーションアンドメンテナンスマニュアル	3-169-258-01	1

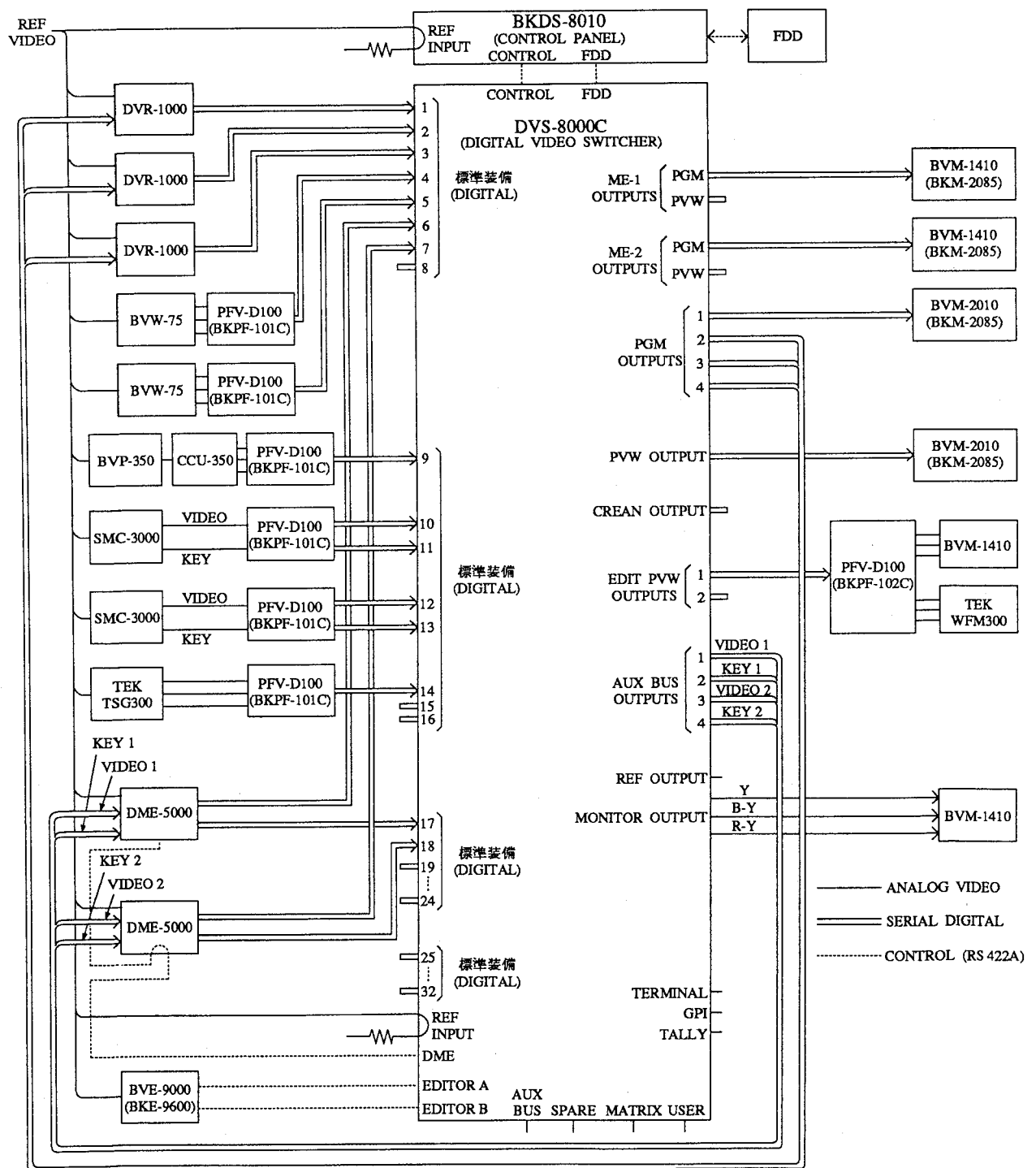
(*1)・・・ラックアングルASSYはあらかじめセットに取り付けられています。

2-10. 別売アクセサリ

DVS-8000Cの別売アクセサリとしては下記のものが用意されています。

- ・BKDS-8010: CONTROL PANEL
- ・BKDS-8031: CLEAN CHROMA KEY BOARD (2枚組)
- ・BKDS-8041: FRAME MEMORY BOARD
- ・BKDS-8090: SPARE POWER SUPPLY UNIT

2-11. システム接続例



第3章 サービスインフォメーション

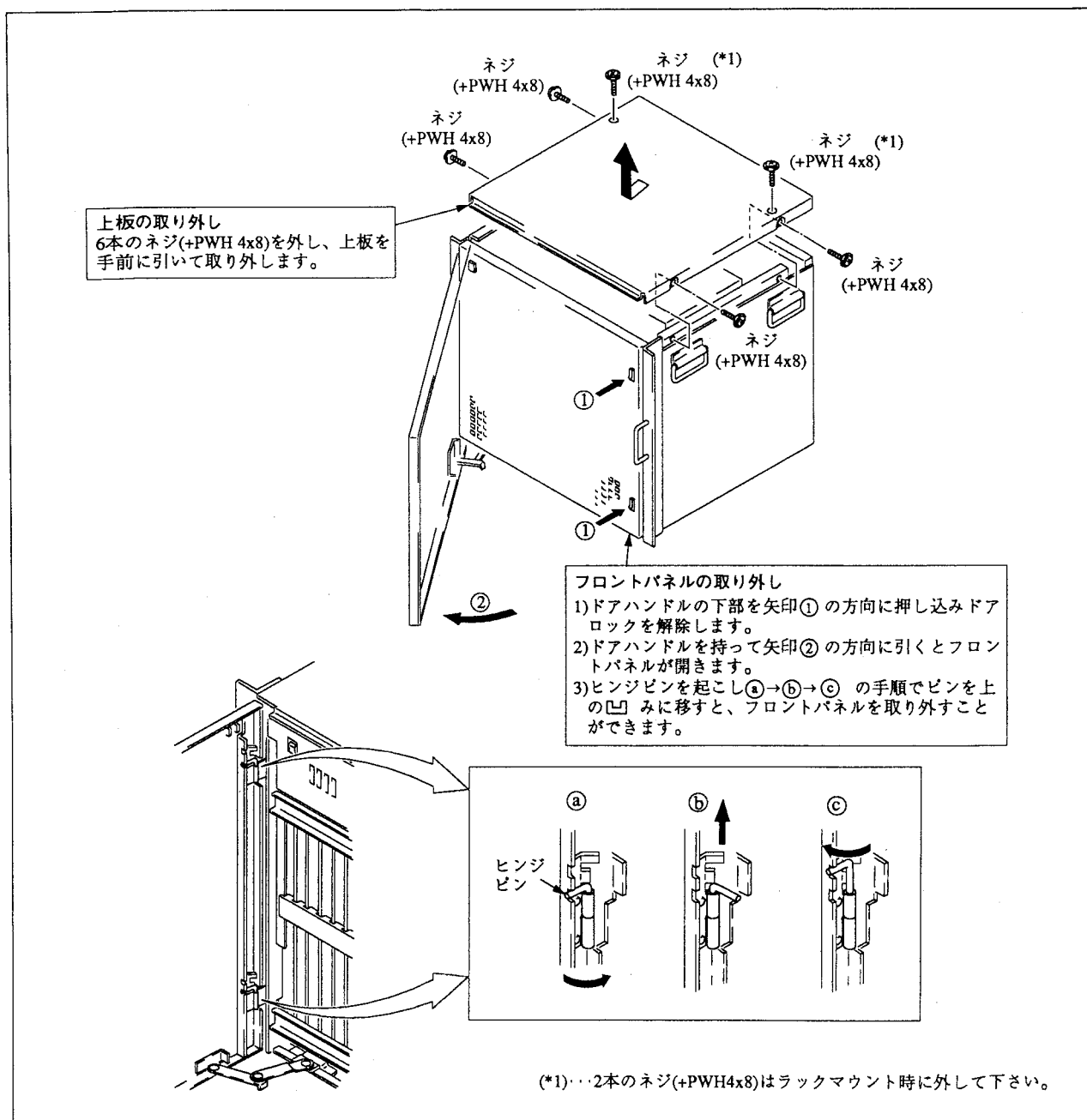
3-1. ラックからの取り外し

- コネクターパネルに接続されている全てのケーブルを外し、ラックマウント用固定ネジを外して、アングルの把手を手前に引き出します。

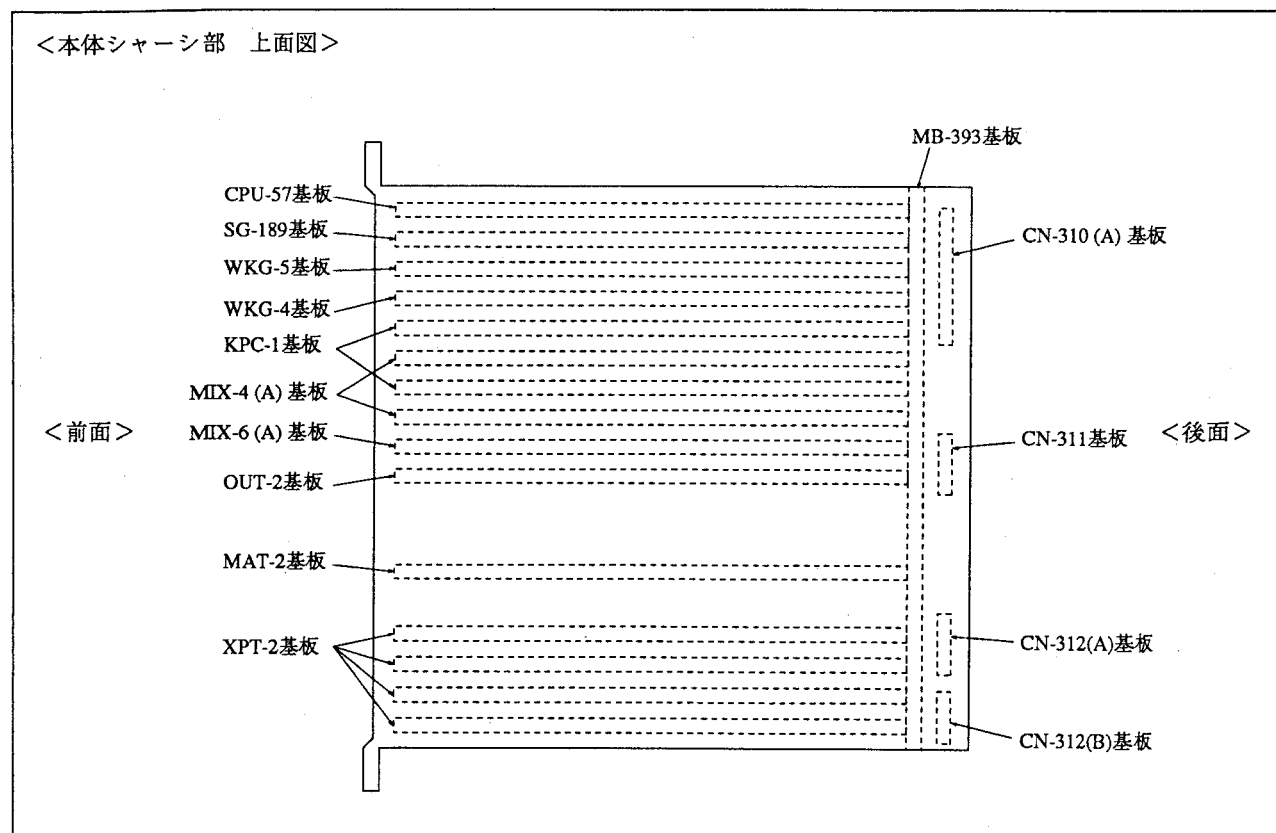
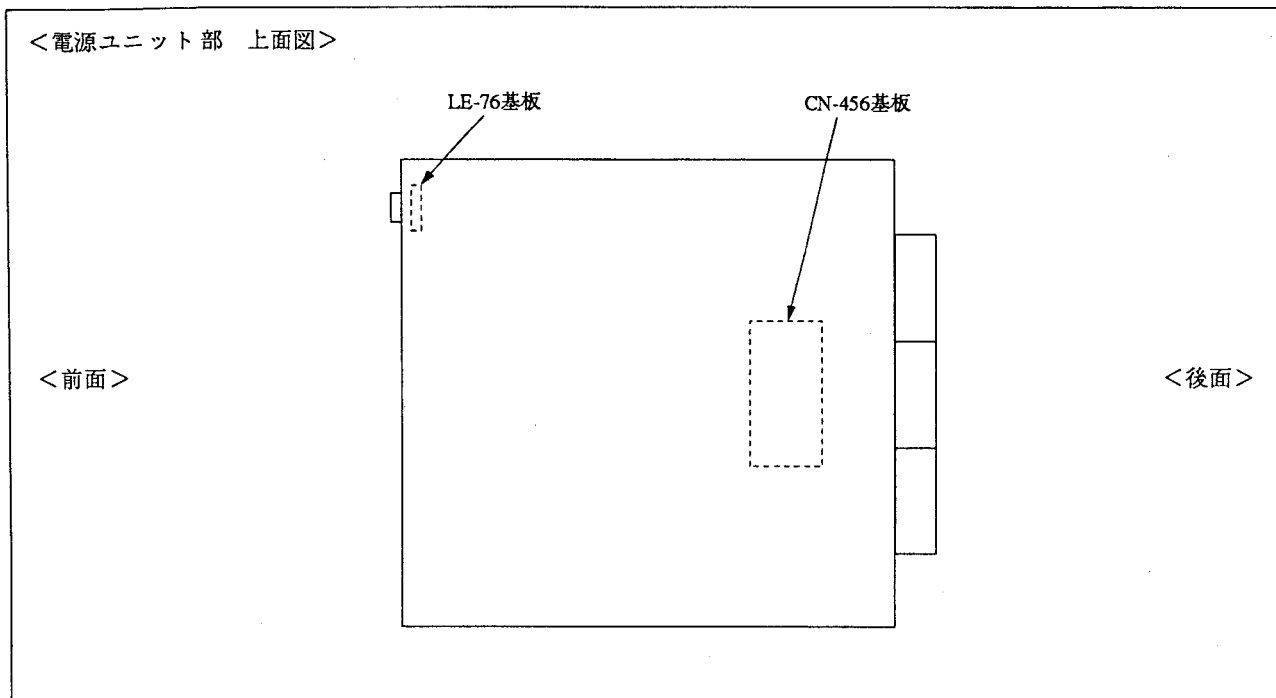
<注意>

ラックから引き出す時には落下防止のため必ず2人以上で作業して下さい。

3-2. 外装の開閉/取り外し



3-3. プリント基板の配置図

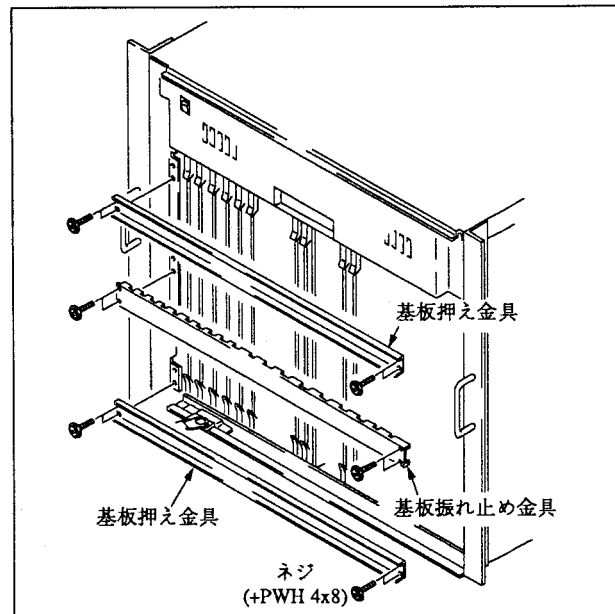


3-4. 回路構成

基板名	機 能
CPU-57	CPU BOARD
SG-189	SYNC GENERATOR BOARD
WKG-5	ENHANCED WIPE BOARD
WKG-4	BASIC WIPE BOARD
KPC-1	KEY PROCESSOR BOARD
MIX-4 (A)	MIXER BOARD
MIX-6 (A)	DSK (DOWNSTREAM KEYER) BOARD
OUT-2	OUTPUT PROCESSOR BOARD
MAT-2	MATTE GENERATOR BOARD
XPT-2	DIGITAL INPUT BOARD
MB-393	MOTHER BOARD
EX-209	EXTENSION BOARD
CN-310 (A)	CONTROL CONNECTOR BOARD
CN-311	OUTPUT CONNECTOR BOARD
CN-312 (A)	PRIMARY INPUT CONNECTOR BOARD (A)
CN-312 (B)	PRIMARY INPUT CONNECTOR BOARD (B)
CN-456	POWER SUPPLY CONNECTOR BOARD
LE-76	POWER LED BOARD

3-5. 基板の取り付け・取り外し方法

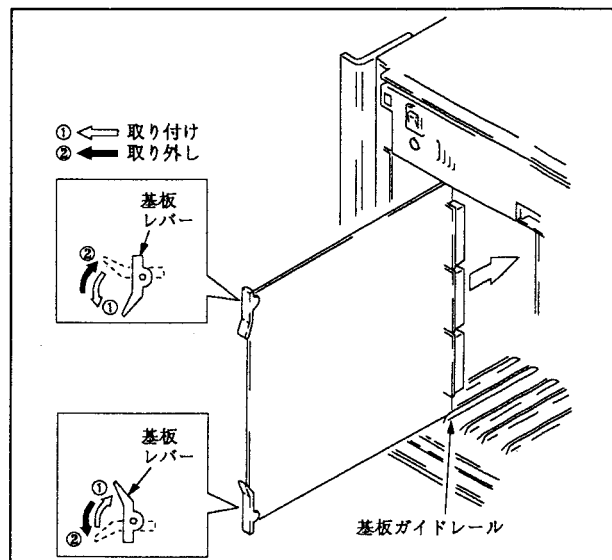
- (1) 3-2. と同じ手順でフロントパネルを外します。
- (2) 基板押え金具 (×2) と基板振れ止め金具 (×1) を固定しているネジ12本 (+PWH 4×8) を外します。



- (3) 基板を基板ガイドレールに沿って挿入します。基板を押し込みながら基板レバーを矢印①方向に倒すと基板を取り付けることができます。
- (4) 基板レバーを矢印②の方向へ押しながら基板を手前に引くと、取り外すことができます。

<注意>

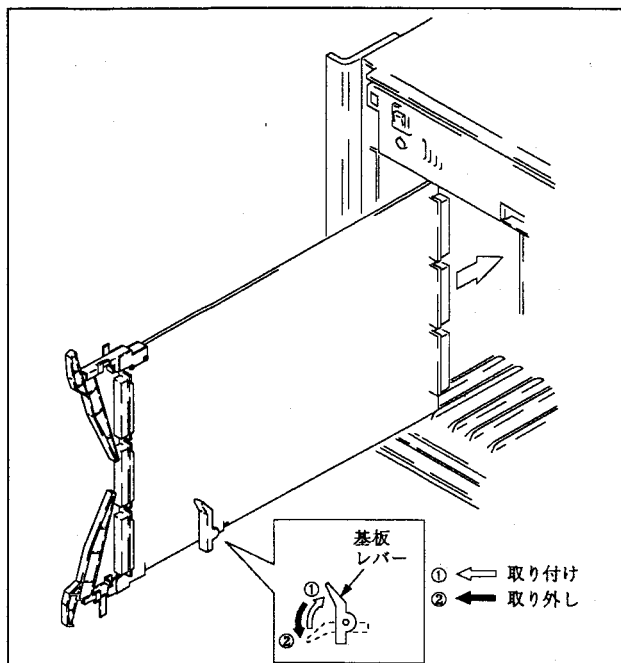
基板の取り付け後、コネクタがMB-393基板にゆるみなく接続されているか確認してください。



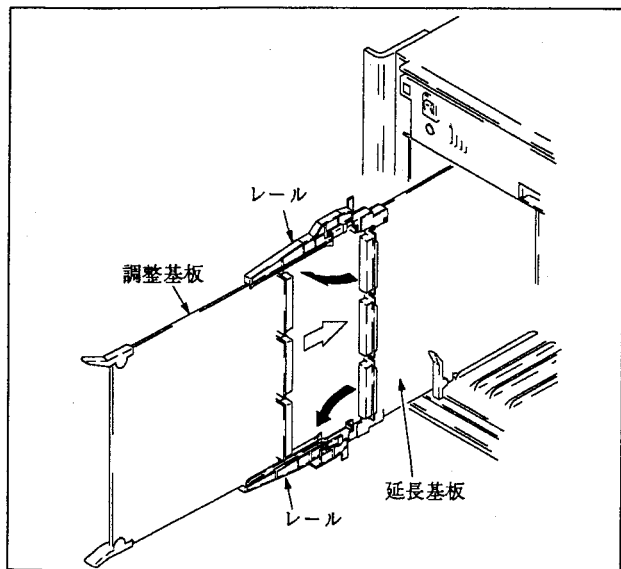
3-6. 延長基板の使用方法

EX-209延長基板 (カード基板調整用)

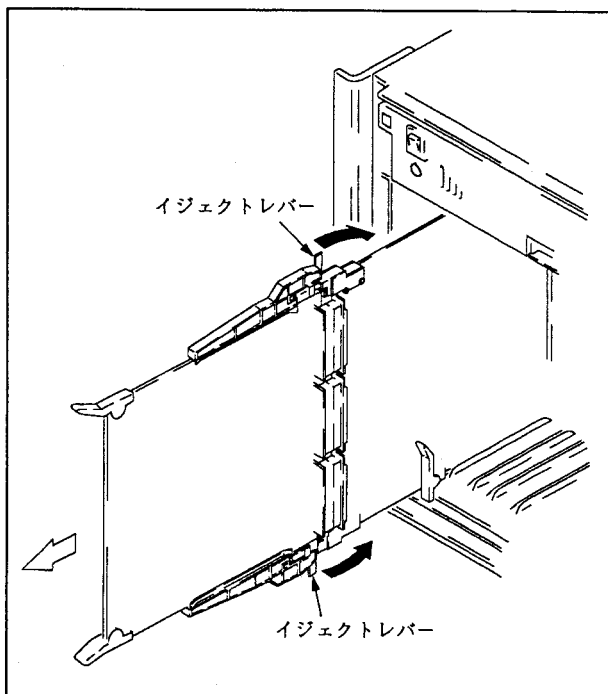
- (1) 3-5. 基板の取り付け・取り外し方法の手順に従って調整を行なう基板を抜き出します。
- (2) 延長基板をスロットに差し込み、基板レバーを押してしっかり固定します。



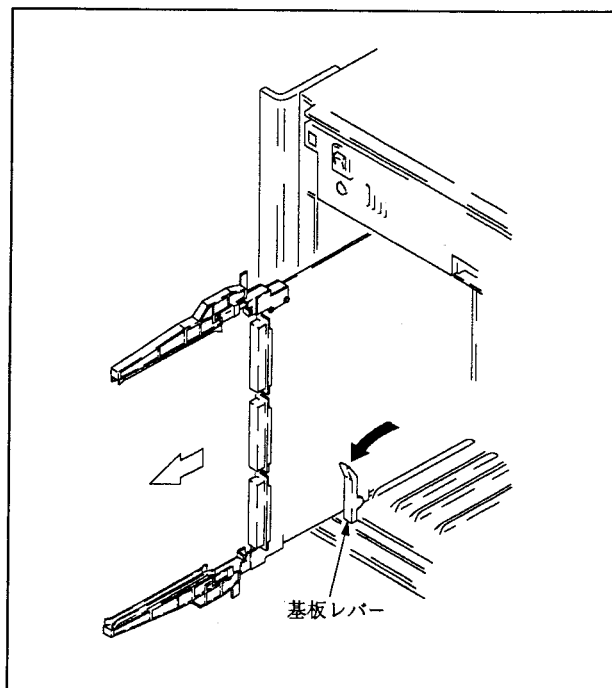
- (3) 延長基板のレールを開きます。(レールロックがかかるまで完全に開いてください。)
延長基板のレールに沿って調整基板を差し込み調整を行います。



- (4) 調整後、イジェクトレバーを矢印の方向へ押し、調整基板を手前に引き抜きます。





- (5) 基板レバーを矢印の方向へ押し、手前に引いて延長基板を抜き出します。



3-7. サービス部品

(1) 安全重要部品

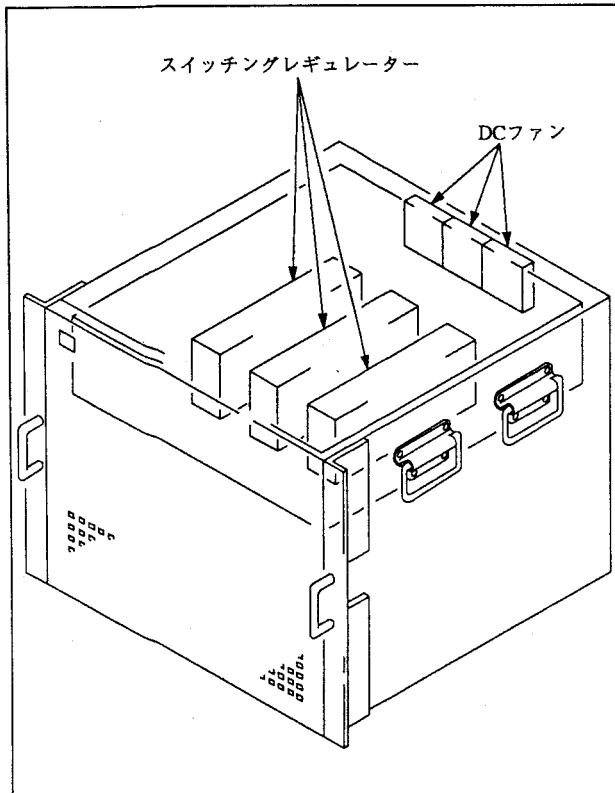
回路図、分解図、電気部品リスト中で  印及び  で囲まれた部品は安全性を維持するために重要な部品です。従ってこれらの部品を交換するときには必ず指定の部品と交換してください。

(2) パーツセンターから供給される部品は、実際にセットに使用している部品と形状等がことなることがときどきあります。これらは「部品の共通化」等によるものです。

(3) 分解図、電気部品リスト中SP欄がSで示されている部品は常時在庫します。SP欄がOで示されている部品は交換頻度が低い部品ですので、在庫していないことがあり、納期が長くなることがあります。

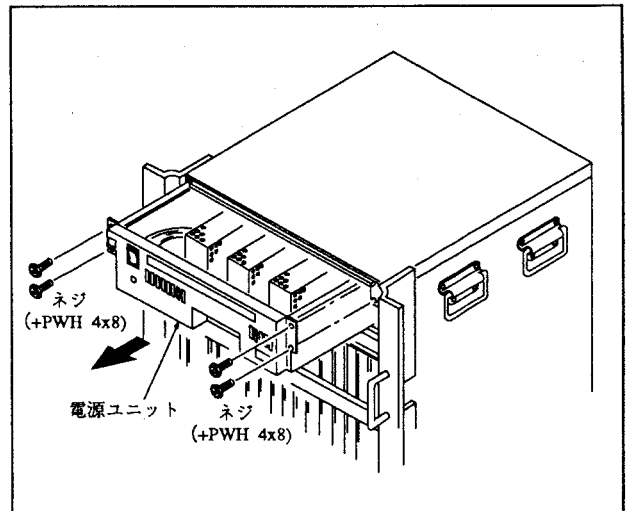
第4章 主要部品の交換

4-1. 主要部品の配置図

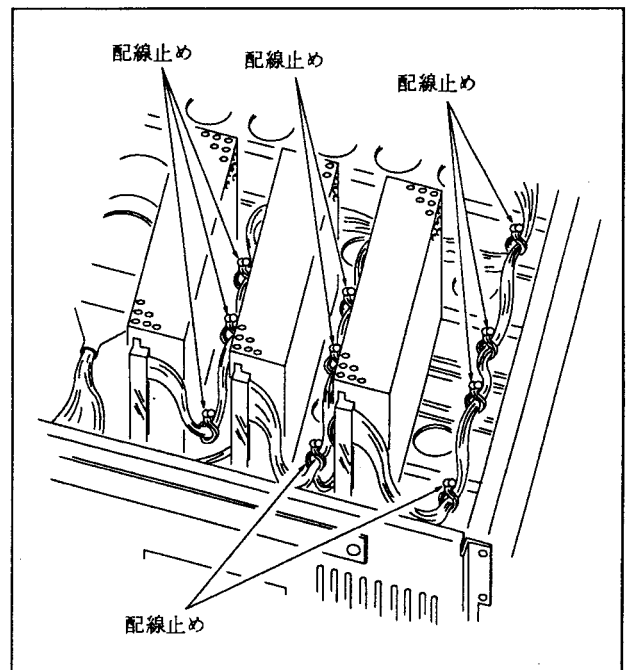


4-2. スイッチングレギュレーターの交換

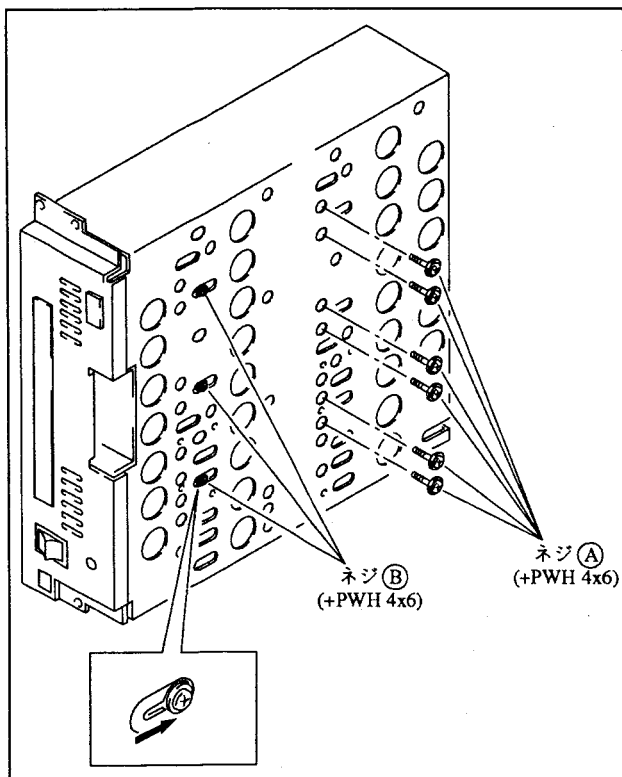
- (1) 3-2.と同じ手順でフロントパネルを外します。
- (2) ネジ4本 (+PWH 4x8) を外し、電源ユニットを手前に引き出します。



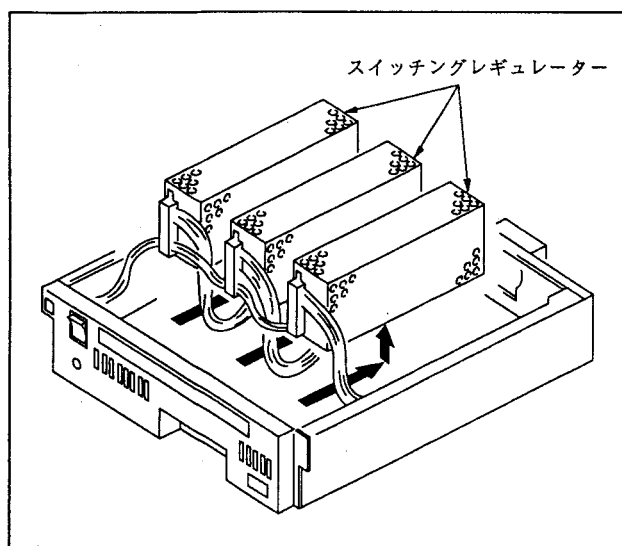
- (3) 配線止め10箇所よりハーネスを外します。



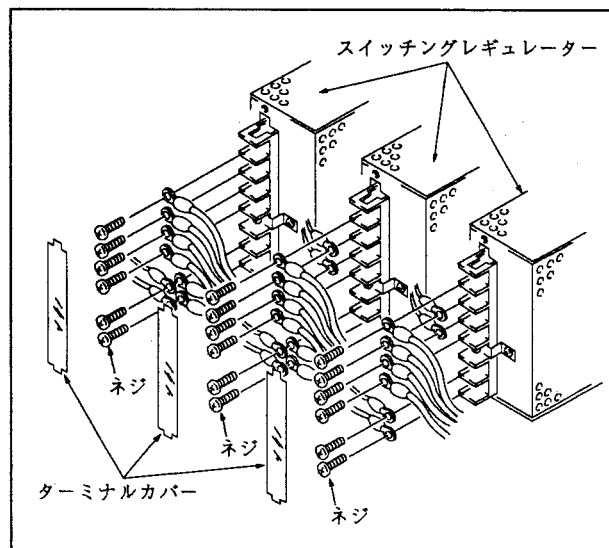
- (4) ネジ ④ 6本 (+PWH 4×6) を外し、ネジ ⑤ 3本 (+PWH 4×6) を緩めます。



- (5) スイッチングレギュレーターを後方へ押す様にして上へ引き上げます。



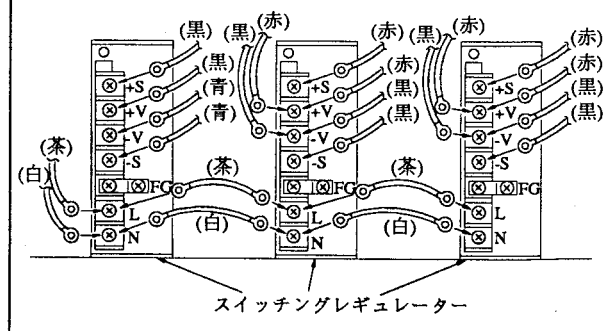
- (6) スイッチングレギュレーター各々のターミナルカバーとネジ6本を外し、ハーネスを外します。



- (7) スイッチングレギュレーターを取り外します。
- (8) (1)～(7) の逆の手順で新しいスイッチングレギュレーターを取り付けます。

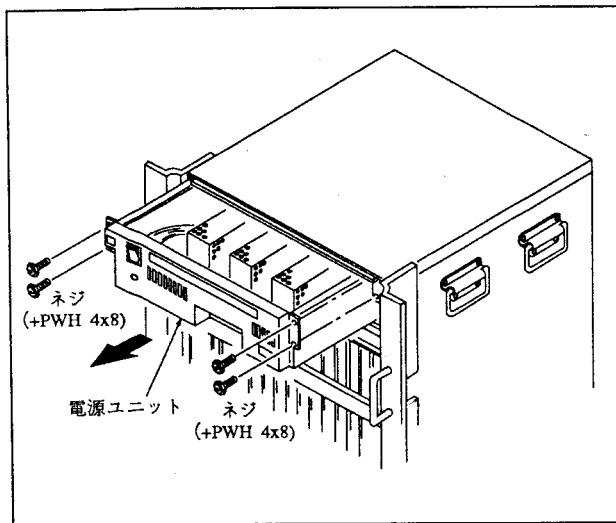
＜注意＞ ハーネスを接続する時は、下図をご参照下さい。

(前面より)

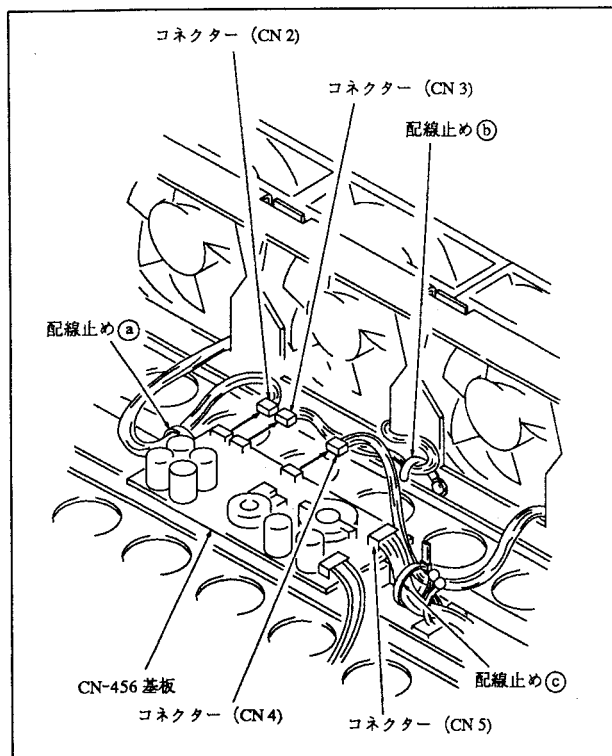


4-3. DCファンの交換

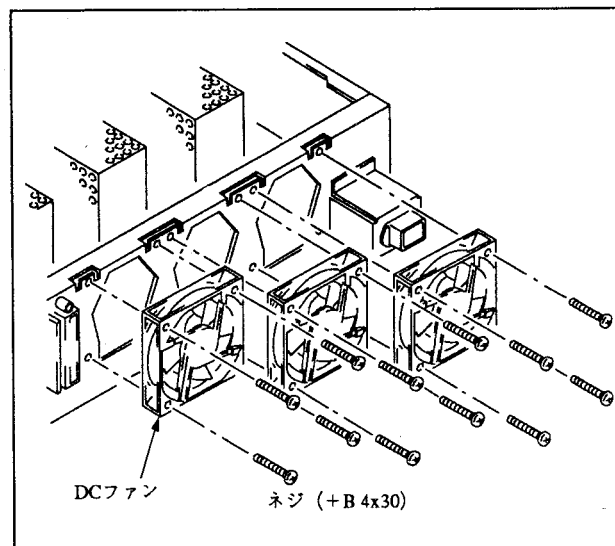
- (1) 3-2. と同じ手順でフロントパネルを外します。
- (2) ネジ4本 (+PWH 4x8) を外し、電源ユニットを手前に引き出します。



- (3) 配線止め2箇所④、⑤よりハーネスを外します。
- (4) コネクター (CN4) とコネクター (CN5) を結束している配線止め③を切断します。
- (5) CN-456基板上のコネクター3個 (CN2, CN3, CN4) を外します。



- (6) 各々のネジ4本 (+B 4x30) を外し、DCファンを取り外します。



- (7) (1)～(6) の逆の手順で新しいDCファンを取り付けます。

<注意>

- (1) ファンモーターのハーネスがファンの羽根に触れないように、(4)で切断した配線止め③と同等部品でCN4, CN5のハーネスを結束して下さい。
- (2) 新しいDCファンを取り付けた後、ファンの固定ネジ (+B 4x30) の先端にネジロックを塗布して下さい。(ネジのゆるみ止めのためです。)

第6章 電気調整

6-1. SG-189 基板

RV401 MONITOR Y OUTPUT GAIN
RV402 MONITOR Y OUTPUT OFFSET
CV401 MONITOR Y OUTPUT
FREQUENCY RESPONSE
RV701 MONITOR Y OUTPUT SYNC GAIN

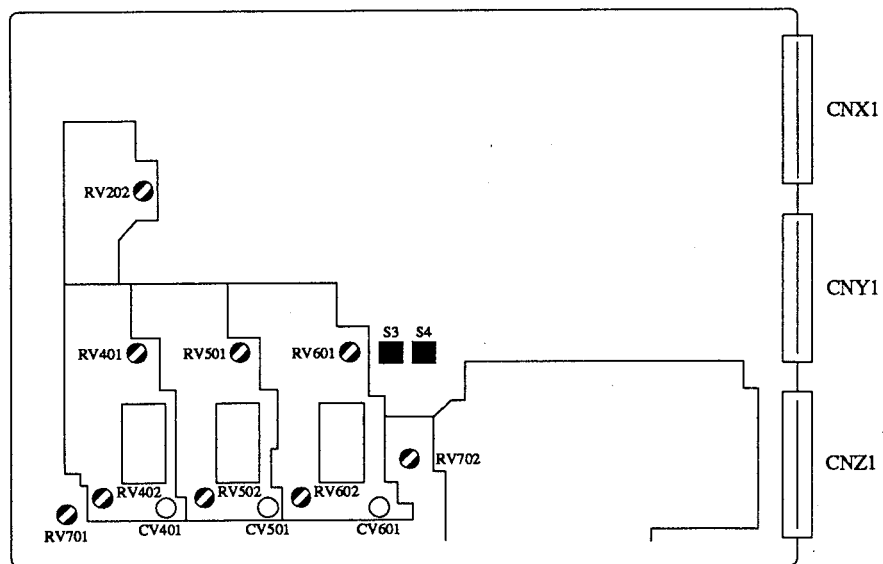
RV501 MONITOR B-Y OUTPUT GAIN
RV502 MONITOR B-Y OUTPUT OFFSET
CV501 MONITOR B-Y OUTPUT
FREQUENCY RESPONSE

RV601 MONITOR R-Y OUTPUT GAIN
RV602 MONITOR R-Y OUTPUT OFFSET
CV601 MONITOR R-Y OUTPUT
FREQUENCY RESPONSE

S3 MONITOR B-Y PHASE ADJUST
S4 MONITOR R-Y PHASE ADJUST

RV702 REF OUTPUT GAIN

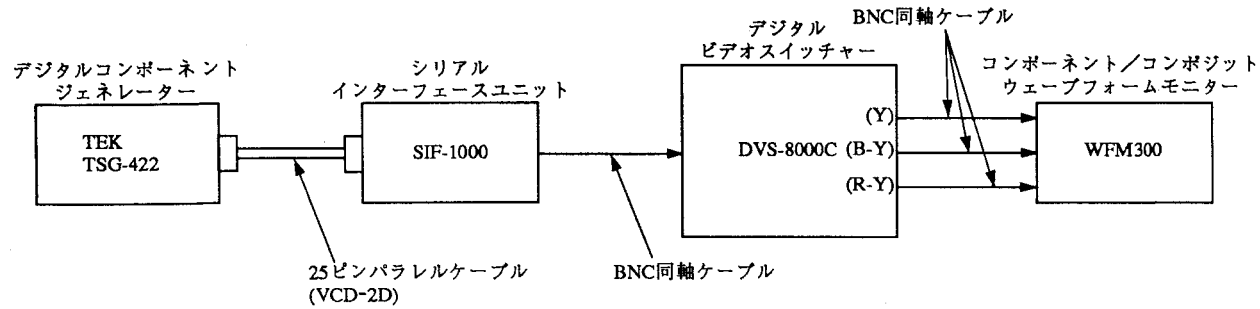
RV202 D/A GAIN



(部品面)

6-1-1. MONITOR OUTPUT 調整

<接続>



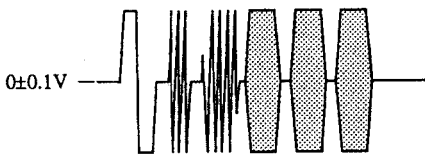
6-1-1-1. Yレベル調整

調整時の状態	規格	調整箇所
<ul style="list-style-type: none">リアパネルのPRIMARY INPUT端子にマルチバースト信号を入力する。コントロールパネルBKDS-8010でPVW BUSにMULTI BURSTを選択する。	<p>MONITOR Y OUTPUT端子</p> <p>※周波数特性：0～5 MHz (0±0.5 dB)</p>	<p>SYNCレベル調整 ●RV701</p> <p>ベダスタルレベル調整 ●RV402</p> <p>ビデオゲイン調整 ●RV401</p> <p>周波数特性調整 ○CV401</p>

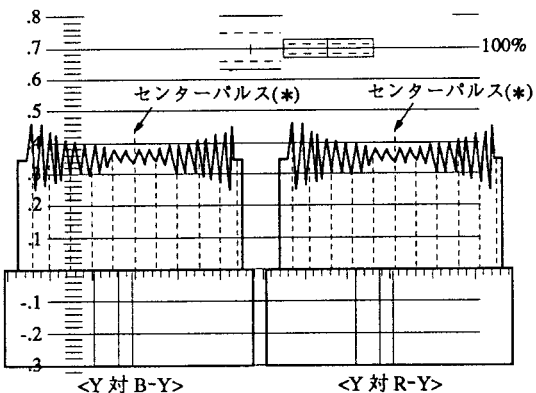
6-1-1-2. B-Yレベル調整

調整時の状態	規格	調整箇所
<ul style="list-style-type: none">リアパネルのPRIMARY INPUT端子にマルチバースト信号を入力する。コントロールパネルBKDS-8010でPVW BUSにMULTI BURSTを選択する。	<p>MONITOR B-Y OUTPUT端子</p> <p>※周波数特性：0～2 MHz (0±0.5 dB)</p>	<p>ベダスタルレベル調整 ●RV502</p> <p>ビデオゲイン調整 ●RV501</p> <p>周波数特性調整 ○CV501</p>


6-1-1-3. R-Yレベル調整

調整時の状態	規格	調整箇所
<ul style="list-style-type: none"> リアパネルのPRIMARY INPUT端子にマルチバースト信号を入力する。 コントロールパネルBKDS-8010でPVW BUSにMULTI BURSTを選択する。 	<p>MONITOR R-Y OUTPUT端子</p>  <p>※周波数特性：0～2 MHz (0±0.5 dB)</p>	<p>ベデスタルレベル調整</p> <p>●RV602</p> <p>ビデオゲイン調整</p> <p>●RV601</p> <p>周波数特性調整</p> <p>○CV601</p>

6-1-1-4. B-Y, R-Y位相調整

調整時の状態	規格	調整箇所
<ul style="list-style-type: none"> リアパネルのPRIMARY INPUT端子に500 MHzボウタイ信号を入力する。 コントロールパネルBKDS-8010でPVW BUSにボウタイ信号を選択する。 WFM300相当をBOWTIE MODEに設定し、MONITOR Y, B-Y, R-Yを入力する。 	<p>MONITOR Y, B-Y, R-Y OUTPUT端子</p> <p>BOWTIE MODE</p>  <p><Y 対 B-Y> <Y 対 R-Y></p> <p>※スキューがセンターパルスに最も近づくように調整する。</p>	<p>B-Y位相調整</p> <p><input type="checkbox"/> S3</p> <p>R-Y位相調整</p> <p><input type="checkbox"/> S4</p>

6-1-2. SYNCレベル調整 (REF OUTPUT)

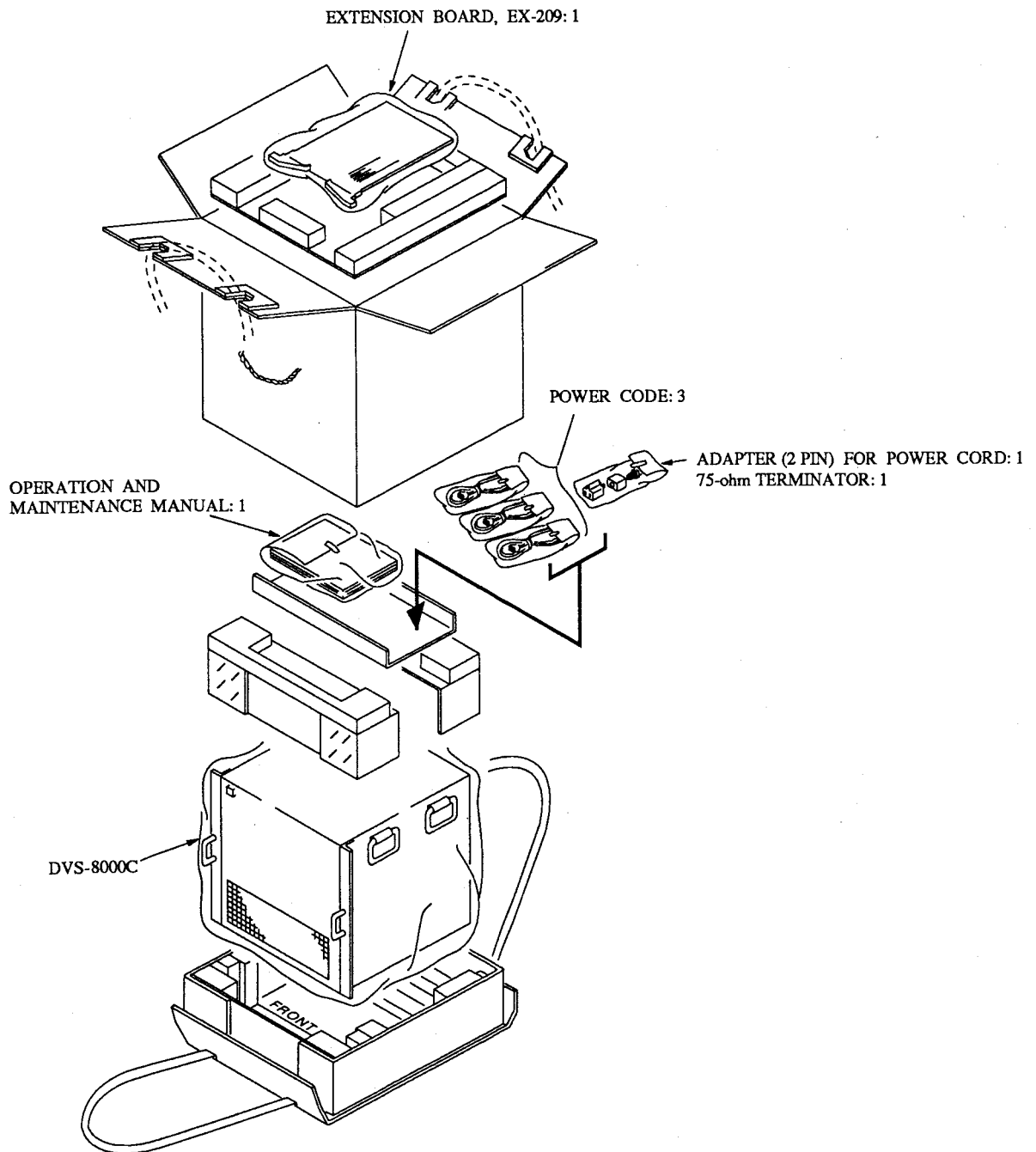
調整時の状態	規格	調整箇所
・リアパネルのREF INPUT端子にブラックバースト信号を入力する。	REF OUTPUT端子 	SYNCレベル調整 ●RV702

6-1-3. D/Aゲイン調整 (D/A OUTPUT)

調整時の状態	規格	調整箇所
	メカニカルセンターに合わせる	D/Aゲイン調整 ●RV202

SECTION 2 INSTALLATION

2-1. UNPACKING AND REPACKING



2-2. OPERATING ENVIRONMENT

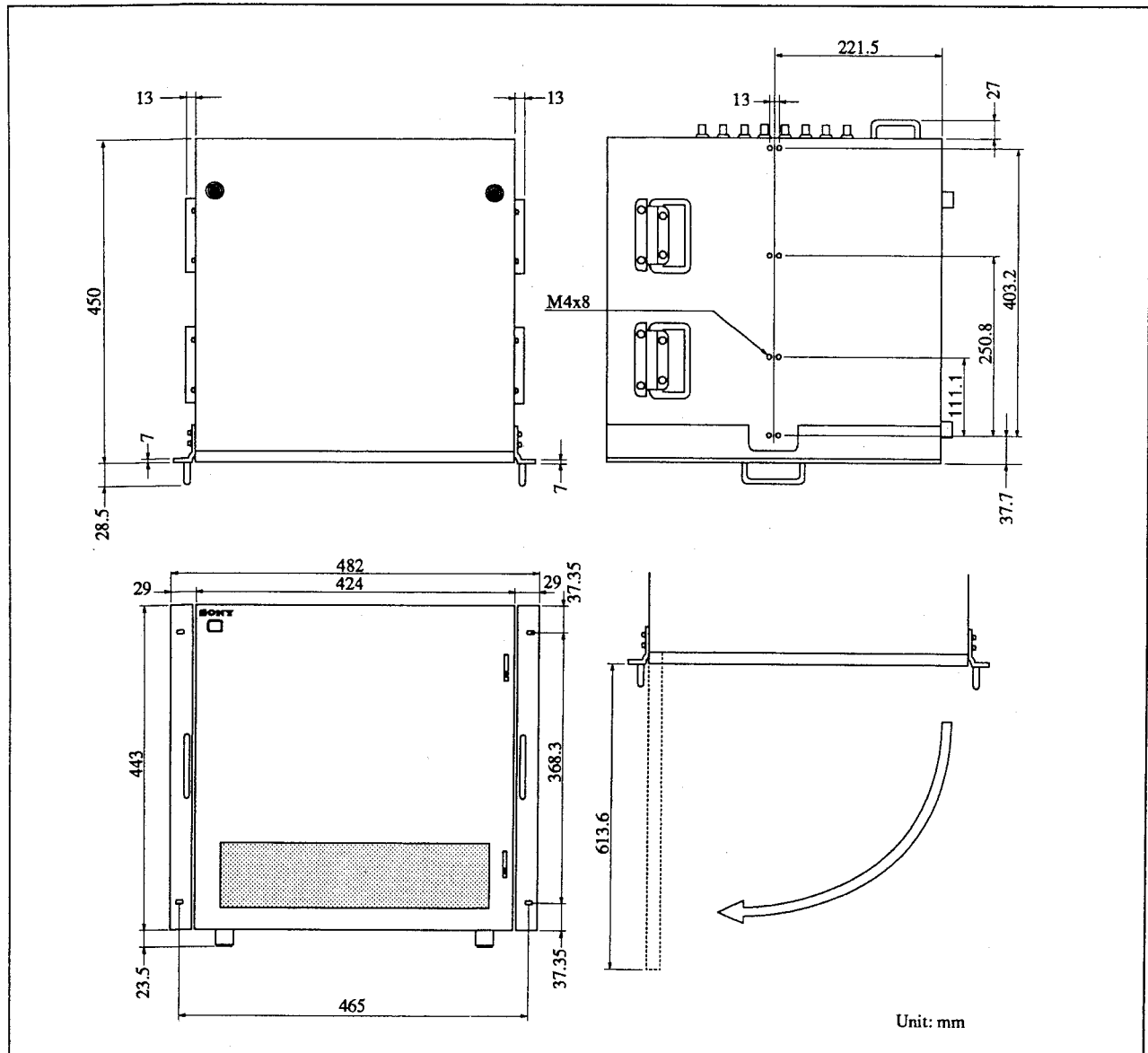
- Install the set in a well ventilated place to prevent a temperature rise in the set. Never cover the ventilation holes of the outer frame.
- Never install the set near a heat source because the environmental temperature during operation should be 5°C to 40°C.

2-3. EXTERNAL DIMENSIONS

- The external dimensions of the set are shown in the following drawing.
- For purposes of serviceability, install the set at least 20 cm away from a wall.

2-4. SUPPLY VOLTAGE

- A switching regulator designed for 90 V to 264 V is used for the power supply unit of the DVS-8000C. Therefore, the supply voltage does not have to be changed if it is within the range of 90 V to 264 V.

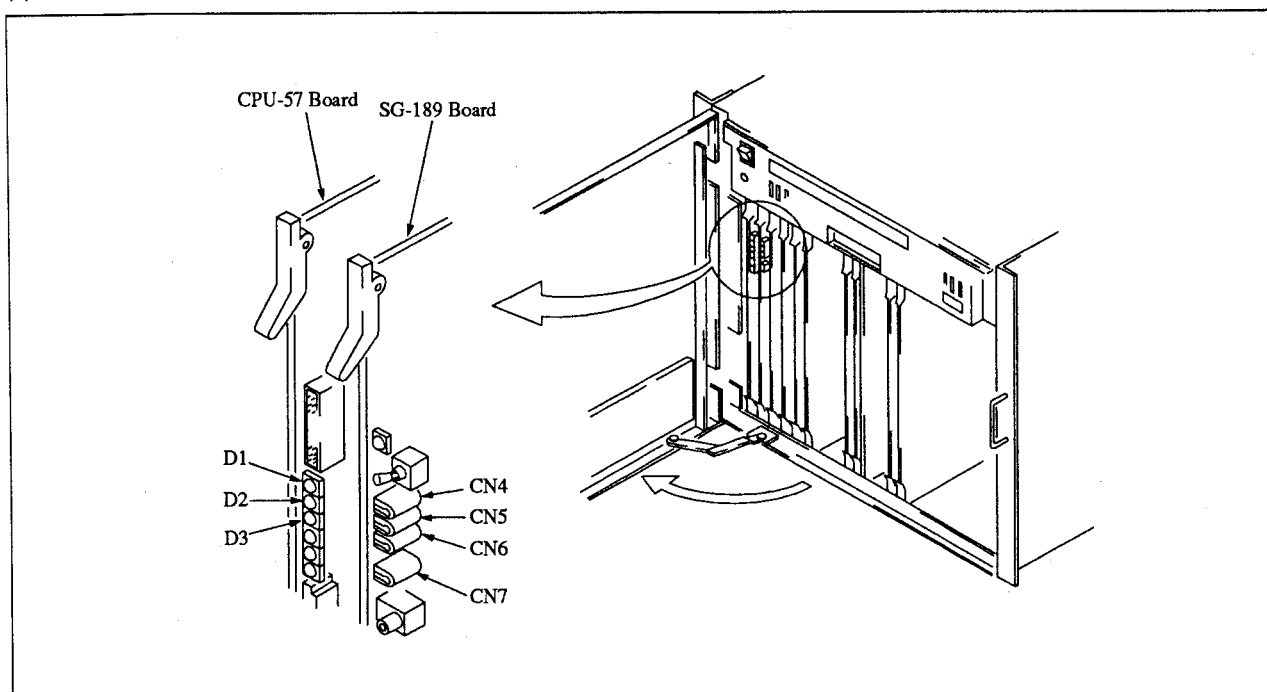


2-5. CONFIRMATION AND ADJUSTMENT AT INSTALLATION

2-5-1. Supply Voltage Setting

After installing the set, check the supply voltage in the set.

- (1) Open the front panel and make sure that the power supply unit is correctly inserted and held by 4 screws (+PWH 4×8) as indicated by the arrows on the front panel of the unit
- (2) Turn on the set and make sure that all the power indicators (D1, D2, D3) of the CPU-57 board light up.



- (3) Connect digital voltmeters to ± 5 V test terminals (CN4, CN5, CN6) and the GND test terminal (CN7) of the SG-189 board. Make sure that the voltage value of each test terminal complies with the standards in the following table.

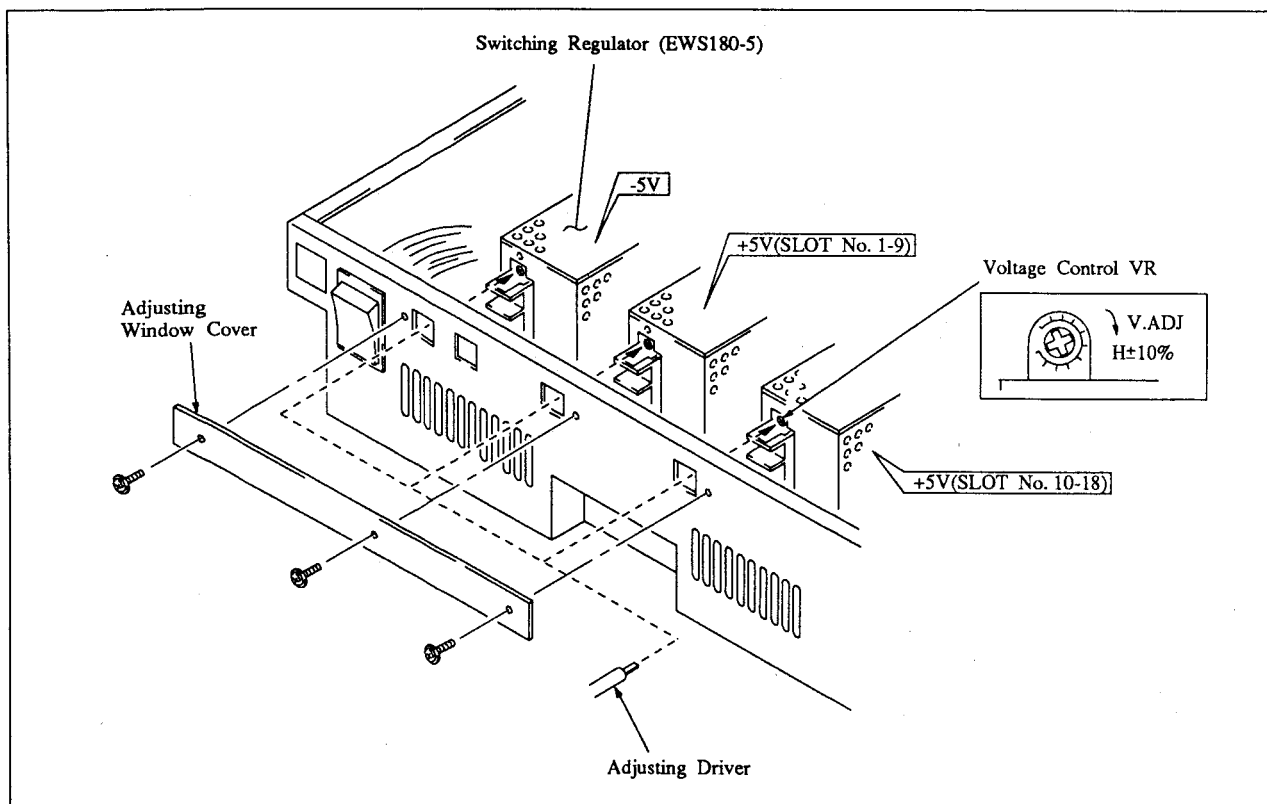
Measured terminal	Purpose	Standards
CN4 (+5 V) \leftrightarrow CN7 (GND)	Measurement of DC voltage (+5 V) of slots No. 1 to 9.	+5.1 V \pm 0.02 V
CN5 (+5 V) \leftrightarrow CN7 (GND)	Measurement of DC voltage (+5 V) of slots No. 10 to 18.	+5.1 V \pm 0.02 V
CN6 (-5 V) \leftrightarrow CN7 (GND)	Measurement of DC voltage (-5 V) of all the slots.	-5.1 V \pm 0.02 V

- If the measured voltage value fails to comply with the standards, adjust the voltage using the following procedure. (Leave the digital voltmeters connected to the test terminals during adjustment.)

STEP 1. Remove the adjusting window cover of the power supply unit.

STEP 2. Insert an adjusting driver into the adjusting window and turn the voltage control VR of the switching regulator which requires adjustment.

Adjust it until obtaining an adequate voltage value on the digital voltmeter.

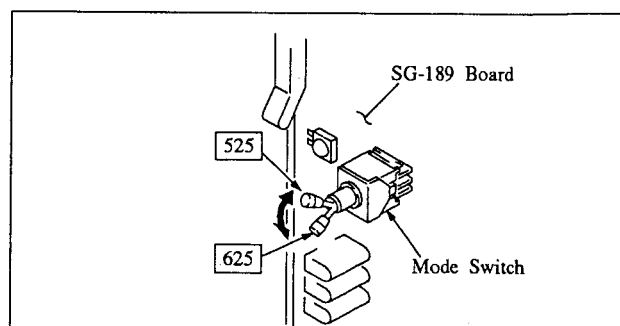


< Note >

- (1) Set the supply voltage after inserting all the card boards (including the option boards).
- (2) Be sure to check the supply voltage again after replacing a card board.
- (3) If you purchased the optional spare power supply unit BKDS-8090, you are advised to set its supply voltage in advance.
- (4) Make sure that the combinations of the voltage control volumes and the test terminals are correct.

2-5-2. Mode Setting of the EIA525 Line/CCIR625 Line

- Set the mode switch on SG-189 board to applicable line system.

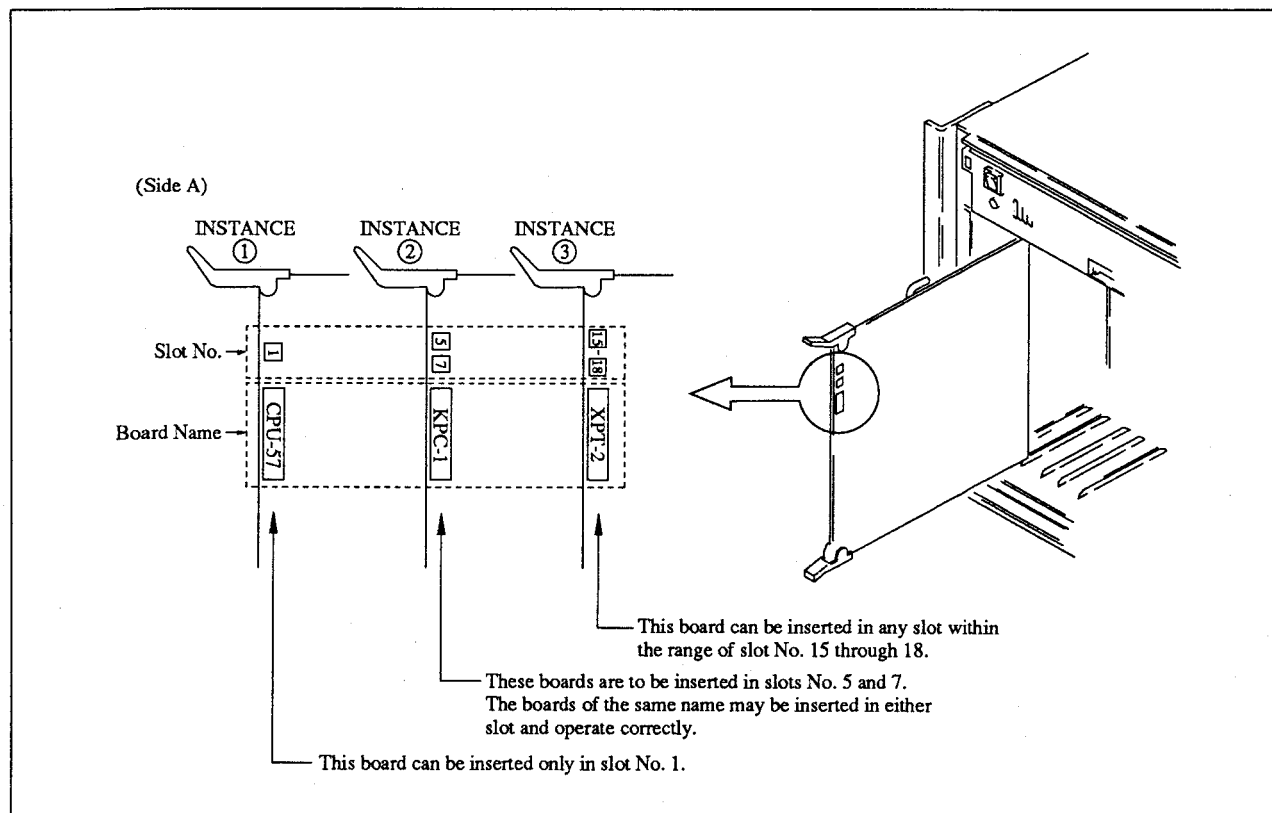


2-5-3. Installation of Card Boards

- Each card board must be installed in the corresponding slot of DVS-8000C.
Make sure that all the boards are in the right slots by referring to the following table.

Slot No.	Board name	Slot No.	Board name
1	CPU-57	9	MIX-6 (A)
2	SG-189	10	OUT-2
3	WKG-5	11 & 12	BKDS-8031 (Option board/a pair)
4	WKG-4	13	MAT-2
5 & 7	KPC-1 (a pair)	14	BKDS-8041 (Option board)
6 & 8	MIX-4 (A) (a pair)	15 to 18	XPT-2

- The board name and the corresponding slot No. are indicated at the top of the door side on both the sides A and B of a board.



- DVS-8000C can be used for various systems and its functions can be extended by selecting BK boards (option).
Install each BK board in the specified range of slots and in the specified sequence according to the slot No. indication at the top part of the door side.

< Note >

- Make sure that the connector of each board is tightly connected to the MB-393 board of the main unit.
- A wrong installation sequence will result in a system error and disable operations.
- Be sure to check the supply voltage after adding a BK board.

2-6. CONNECTORS

When connecting cables to various connectors on the connector panel at the time of installation or servicing, connect the following connectors or their equivalents.

Connector function name on connector panel	Connector parts No. and name of cable
CONTROL PANEL (CONTROL) FDD EDITOR A EDITOR B DME AUX BUS SPARE MATRIX USER	} D-SUB 9 PIN (Male) PLUG 1-560-651-00 SHELL 1-561-749-00
TERMINAL GPI	} D-SUB 25 PIN (Male) PLUG 1-566-356-00 (*1) SHELL 1-563-377-00
TALLY	D-SUB 50 PIN (Male) PLUG 1-566-358-00 (*1) SHELL 1-563-379-00
REF INPUT MONITOR OUTPUT (Y, B-Y, R-Y) REF OUTPUT ME-1 OUTPUTS ME-2 OUTPUTS PGM OUTPUTS CLEAN OUTPUT PVW OUTPUT AUX BUS OUTPUTS EDIT PVW OUTPUTS PRIMARY INPUTS	} BNC coaxial connector plug
AC IN	MAIN POWER SUPPLY CABLE (Accessory of DVS-8000C)

(*1).....The following solderless connectors must be used for the plug.

AWG #18~#22: 1-566-493-00

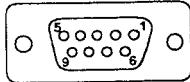
AWG #22~#24: 1-564-774-00

AWG #24~#30: 1-564-775-00

2-7. INPUT/OUTPUT SIGNALS OF CONNECTORS

The input/output signals of the connectors on the connector panel are specified in the following table.

- CONTROL PANEL [CONTROL] : RS-422A (D-SUB 9 PIN)

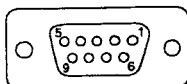


-EXT VIEW-

PIN No.	Signal name	Function
1	GND	Frame ground
2	CON TX-A	Transmit data (–) from DVS-8000C to CONTROL PANEL (*1)
3	CON RX-B	Receive data (+) from CONTROL PANEL to DVS-8000C
4	GND	Common ground from CONTROL PANEL to DVS-8000C
5	—	Spare
6	GND	Common ground from DVS-8000C to CONTROL PANEL
7	CON TX-B	Transmit data (+) from DVS-8000C to CONTROL PANEL
8	CON RX-A	Receive data (–) from CONTROL PANEL to DVS-8000C
9	GND	Frame ground

(*1) . . . CONTROL PANEL BKDS-8010, etc.

- CONTROL PANEL [FDD] : RS-422A (D-SUB 9 PIN)

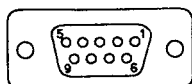


-EXT VIEW-

PIN No.	Signal name	Function
1	GND	Frame ground
2	FDD TX-A	Transmit data (–) from DVS-8000C to FDD (*2)
3	FDD RX-B	Receive data (+) from FDD to DVS-8000C
4	GND	Common ground from FDD to DVS-8000C
5	—	Spare
6	GND	Common ground from DVS-8000C to FDD
7	FDD TX-B	Transmit data (+) from DVS-8000C to FDD
8	FDD RX-A	Receive data (–) from FDD to DVS-8000C
9	GND	Frame ground

(*2) . . . FDD supplied as an accessory of BKDS-8010, etc.

• EDITOR A : RS-422A (D-SUB 9 PIN)

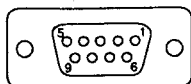


-EXT VIEW-

PIN No.	Signal name	Function
1	GND	Frame ground
2	EDT A TX-A	Transmit data (-) from DVS-8000C to EDITOR (*3)
3	EDT A RX-B	Receive data (+) from EDITOR to DVS-8000C
4	GND	Common ground from EDITOR to DVS-8000C
5	————	Spare
6	GND	Common ground from DVS-8000C to EDITOR
7	EDT A TX-B	Transmit data (+) from DVS-8000C to EDITOR
8	EDT A RX-A	Receive data (-) from EDITOR to DVS-8000C
9	GND	Frame ground

(*3) . . . EDITING CONTROL UNIT BVE-9000, etc.

• EDITOR B : RS-422A (D-SUB 9 PIN)

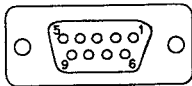


-EXT VIEW-

PIN No.	Signal name	Function
1	GND	Frame ground
2	EDT B TX-A	Transmit data (-) from DVS-8000C to EDITOR (*4)
3	EDT B RX-B	Receive data (+) from EDITOR to DVS-8000C
4	GND	Common ground from EDITOR to DVS-8000C
5	————	Spare
6	GND	Common ground from DVS-8000C to EDITOR
7	EDT B TX-B	Transmit data (+) from DVS-8000C to EDITOR
8	EDT B RX-A	Receive data (-) from EDITOR to DVS-8000C
9	GND	Frame ground

(*4) . . . BVE-9000, etc.

• DME : RS-422A (D-SUB 9 PIN)

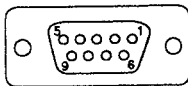


-EXT VIEW-

PIN No.	Signal name	Function
1	GND	Frame ground
2	DME TX-A	Transmit data (–) from DVS-8000C to DME (*5)
3	DME RX-B	Receive data (+) from DME to DVS-8000C
4	GND	Common ground from DME to DVS-8000C
5	—	Spare
6	GND	Common ground from DVS-8000C to DME
7	DME TX-B	Transmit data (+) from DVS-8000C to DME
8	DME RX-A	Receive data (–) from DME to DVS-8000C
9	GND	Frame ground

(*5) . . . DIGITAL MULTI EFFECTS DME-5000, etc.

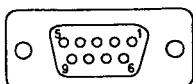
• AUX BUS (REMOTE) : RS-422A (D-SUB 9 PIN)



-EXT VIEW-

PIN No.	Signal name	Function
1	GND	Frame ground
2	AUX TX-A	Transmit data (–) from DVS-8000C to AUX BUS REMOTE
3	AUX RX-B	Receive data (+) from AUX BUS REMOTE to DVS-8000C
4	GND	Common ground from AUX BUS REMOTE to DVS-8000C
5	—	Spare
6	GND	Common ground from DVS-8000C to AUX BUS REMOTE
7	AUX TX-B	Transmit data (+) from DVS-8000C to AUX BUS REMOTE
8	AUX RX-A	Receive data (–) from AUX BUS REMOTE to DVS-8000C
9	GND	Frame ground

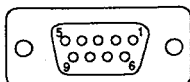
• SPARE : RS-422A (D-SUB 9 PIN)



-EXT VIEW-

PIN No.	Signal name	Function
1	GND	Frame ground
2	SPARE D1 (-)	Transmit (receive) data (-) from DVS-8000C
3	SPARE D2 (+)	Receive (transmit) data (+) to DVS-8000C
4	GND	Common ground to DVS-8000C
5	————	Spare
6	GND	Common ground from DVS-8000C
7	SPARE D1 (+)	Transmit (receive) data (+) from DVS-8000C
8	SPARE D2 (-)	Receive (transmit) data (-) to DVS-8000C
9	GND	Frame ground

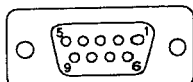
• MATRIX (SWITCHER) : RS-422A (D-SUB 9 PIN)



-EXT VIEW-

PIN No.	Signal name	Function
1	GND	Frame ground
2	MTX RX-A	Receive data (-) from MATRIX SWITCHER to DVS-8000C
3	MTX TX-B	Transmit data (+) from DVS-8000C to MATRIX SWITCHER
4	GND	Common ground from DVS-8000C to MATRIX SWITCHER
5	————	Spare
6	GND	Common ground from MATRIX SWITCHER to DVS-8000C
7	MTX RX-B	Receive data (+) from MATRIX SWITCHER to DVS-8000C
8	MTX TX-A	Transmit data (-) from DVS-8000C to MATRIX SWITCHER
9	GND	Frame ground

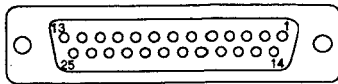
- USER : RS-422A (D-SUB 9 PIN)



-EXT VIEW-

PIN No.	Signal name	Function
1	GND	Frame ground
2	USER D1 (-)	Transmit (receive) data (-) from DVS-8000C
3	USER D2 (+)	Receive (transmit) data (+) to DVS-8000C
4	GND	Common ground to DVS-8000C
5	—	Spare
6	GND	Common ground from DVS-8000C
7	USER D1 (+)	Transmit (receive) data (+) from DVS-8000C
8	USER D2 (-)	Receive (transmit) data (-) to DVS-8000C
9	GND	Frame ground

• TERMINAL : RS-232C (D-SUB 25 PIN)

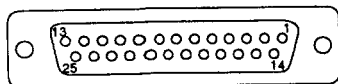


—EXT VIEW—

PIN No.	Signal name	Function
1	GND	Frame ground
2	RXD	Receive data
3	TXD	Transmit data
4	CTS	Transmit enable
5	RTS	Transmit request
6	—	NC
7	GND	Ground
8	—	NC
9	—	
10	—	
11	—	
12	—	
13	—	
14	—	
15	—	
16	—	
17	—	
18	—	
19	—	
20	—	
21	—	
22	—	
23	—	
24	—	
25	—	

• GPI : (D-SUB 25 PIN) INPUT×8, TTL

OUTPUT×7, Relay contact 30 V 100 mA (at the resistance load)

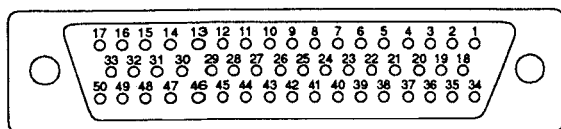


—EXT VIEW—

PIN No.	Signal name	Function
1	GND	Ground
2	GND	Ground
3	GPI IN 2	General-purpose input
4	GPI IN 4	
5	GPI IN 6	
6	GPI IN 8	
7	GPI OUT 1B	General-purpose output
8	GPI OUT 2B	
9	GPI OUT 3B	
10	GPI OUT 4B	
11	GPI OUT 5B	
12	GPI OUT 6B	
13	GPI OUT 7B	
14	GND	Ground
15	GPI IN 1	General-purpose input
16	GPI IN 3	
17	GPI IN 5	
18	GPI IN 7	
19	GPI OUT 1A	General-purpose output
20	GPI OUT 2A	
21	GPI OUT 3A	
22	GPI OUT 4A	
23	GPI OUT 5A	
24	GPI OUT 6A	
25	GPI OUT 7A	

※ A and B of the same number constitute a pair of relay contacts.

- TALLY : (D-SUB 50 PIN) OUTPUT×7, relay contact 30 V 100 mA (at the resistance load)



PIN No.	Signal name	Function
1	TALLY COM	Common output
2	TALLY COM	
3	TALLY COM	
4	TALLY 3	Primary tally output
5	TALLY 6	
6	TALLY 9	
7	TALLY 12	
8	TALLY 15	
9	TALLY 18	
10	TALLY 21	
11	TALLY 24	
12	TALLY 27	
13	TALLY 30	
14	—	NC
15	—	NC
16	—	NC
17	—	NC
18	TALLY COM	Common output
19	TALLY COM	
20	TALLY 2	Primary tally output
21	TALLY 5	
22	TALLY 8	
23	TALLY 11	
24	TALLY 14	
25	TALLY 17	

PIN No.	Signal name	Function
26	TALLY 20	Primary tally output
27	TALLY 23	
28	TALLY 26	
29	TALLY 29	
30	TALLY 32	
31	TALLY ME 2	ME-2 tally output
32	TALLY CK 2	Chroma key 2 tally output
33	—	NC
34	TALLY COM	Common output
35	TALLY COM	
36	TALLY 1	Primary tally output
37	TALLY 4	
38	TALLY 7	
39	TALLY 10	
40	TALLY 13	
41	TALLY 16	
42	TALLY 19	
43	TALLY 22	
44	TALLY 25	
45	TALLY 28	
46	TALLY 31	
47	TALLY ME 1	ME-1 tally output
48	TALLY CK 1	Chroma key 1 tally output
49	—	NC
50	—	

※ The contact between each tally and each common output is a relay contact.

- REF INPUT : BNC connector, loop through
ANALOG SYNC 0 ± 3 dB
- REF OUTPUT : BNC connector, 75Ω
ANALOG SYNC 0 ± 3 dB
- MONITOR OUTPUT: BNC connector, 75Ω
[Y], [B-Y], [R-Y] ANALOG $1.0\text{ Vp-p}\pm 3$ dB
- ME-1 OUTPUTS : BNC connector, 75Ω
[PGM], [PVW] SERIAL DIGITAL $800\text{ mV}\pm 10\%$
- ME-2 OUTPUTS : BNC connector, 75Ω
[PGM], [PVW] SERIAL DIGITAL $800\text{ mV}\pm 10\%$
- PGM OUTPUTS : BNC connector, 75Ω
[1]~[4] SERIAL DIGITAL $800\text{ mV}\pm 10\%$
- CLEAN OUTPUT : BNC connector, 75Ω
SERIAL DIGITAL $800\text{ mV}\pm 10\%$
- PVW OUTPUT : BNC connector, 75Ω
SERIAL DIGITAL $800\text{ mV}\pm 10\%$
- AUX BUS OUTPUTS : BNC connector, 75Ω
[1]~[4] SERIAL DIGITAL $800\text{ mV}\pm 10\%$
- EDIT PVW OUTPUTS : BNC connector, 75Ω
[1], [2] SERIAL DIGITAL $800\text{ mV}\pm 10\%$
- PRIMARY INPUTS : BNC connector, 75Ω
[1]~[32] SERIAL DIGITAL $800\text{ mV}\pm 10\%$

2-8. RACK MOUNTING

- DVS-8000C can be mounted in a standard 19 inch rack. Be sure to use the rack mount rail RMM-18DV available as an option.

< Necessary parts >

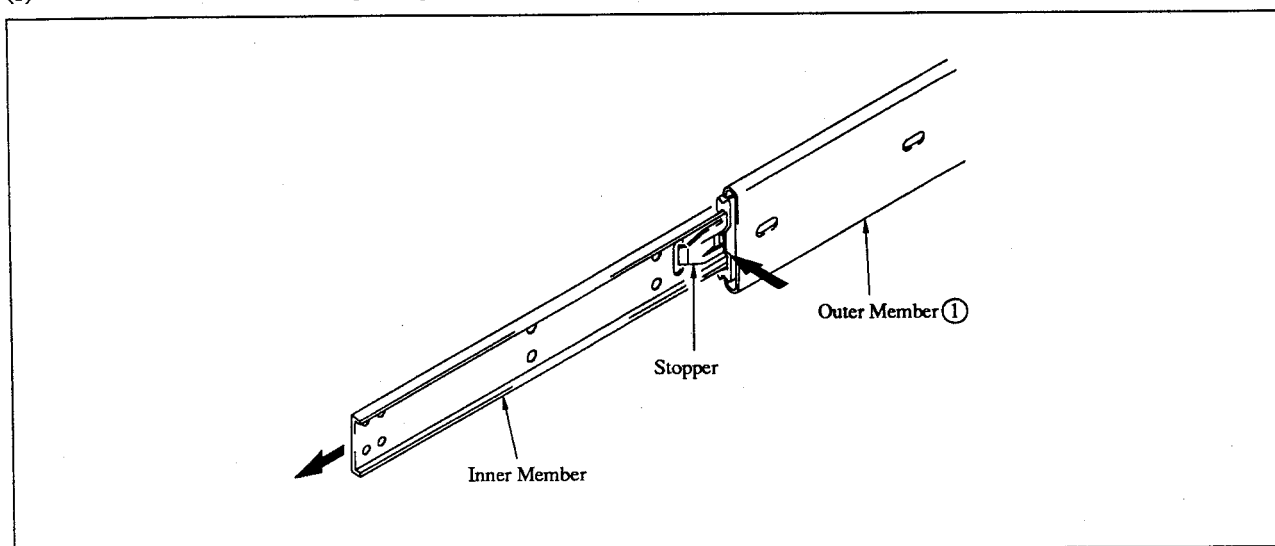
- Rack mount rail RMM-18DV
- 8 screws for locking flat nut/long type (+B 4×8)
- 4 screws for rack mounting (+RK 5×16)
- 4 decorative washers for rack mounting
(Sony Parts No. 2-297-913-01)

< Cautions >

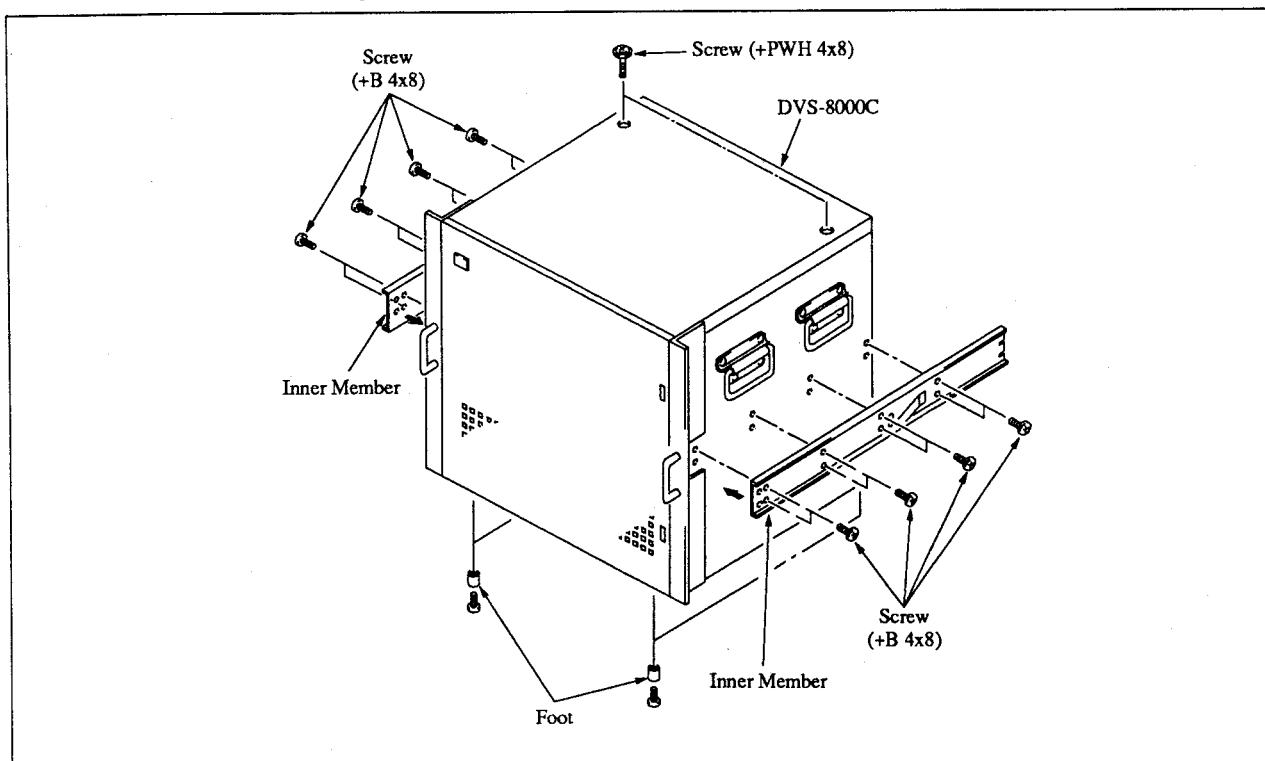
- (1) If you mount DVS-8000C or a related model in a 19 inch standard rack, you are advised to install a ventilation fan to prevent a temperature rise in the rack.
Make sure that all the sets in the rack can be operated within the temperature range of 5°C to 40°C .
- (2) Be sure to use the recommended rail. The set cannot be locked completely to a rack by rack angles alone.
- (3) You are advised to lock the rack to the floor with strong bolts. When you pull out the set from the rack, the bolts will prevent its fall.
- (4) An installation manual is packed with the rack mount rail RMM-18DV. The method for mounting the DVR Series VTR on a rack is explained. Since the rack mounting procedure of DVS-8000C differs somewhat from that of VTR, follow the instructions in this manual.

< Mounting procedure >

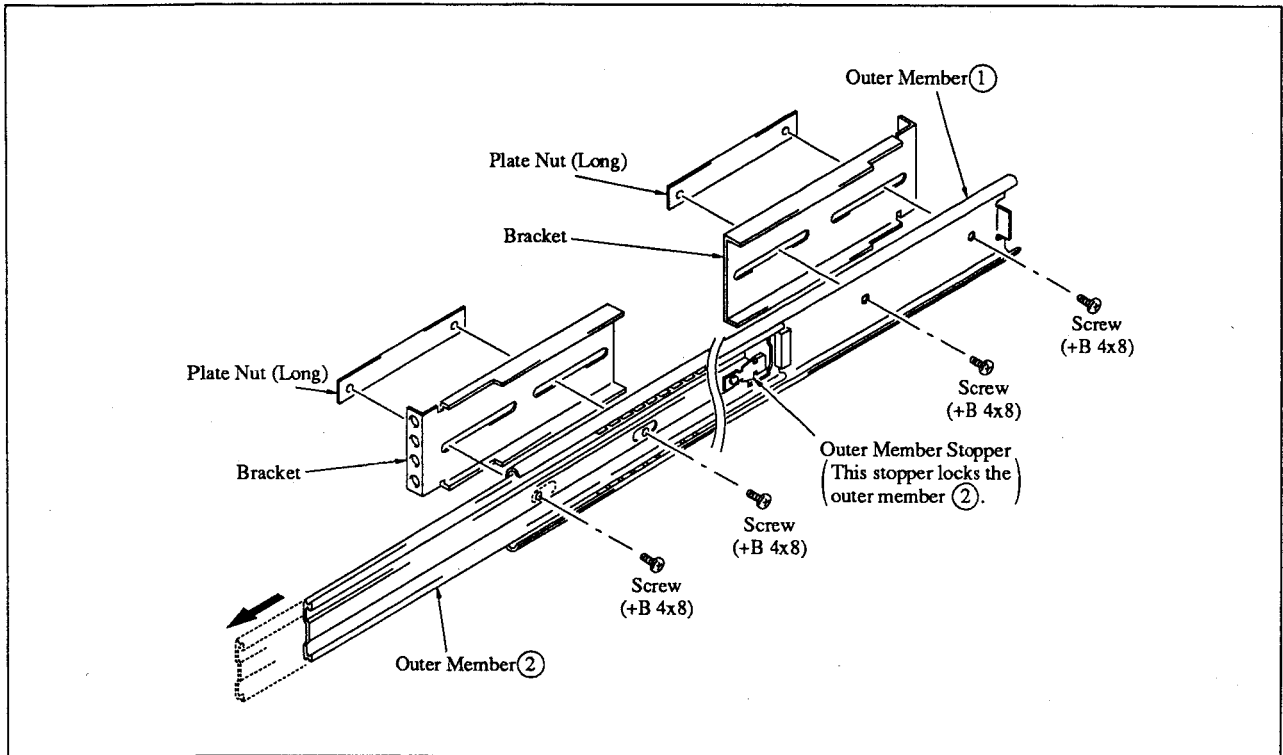
- (1) Pull out the inner member while pressing the stopper of the rack mount rail RMM-18DV.



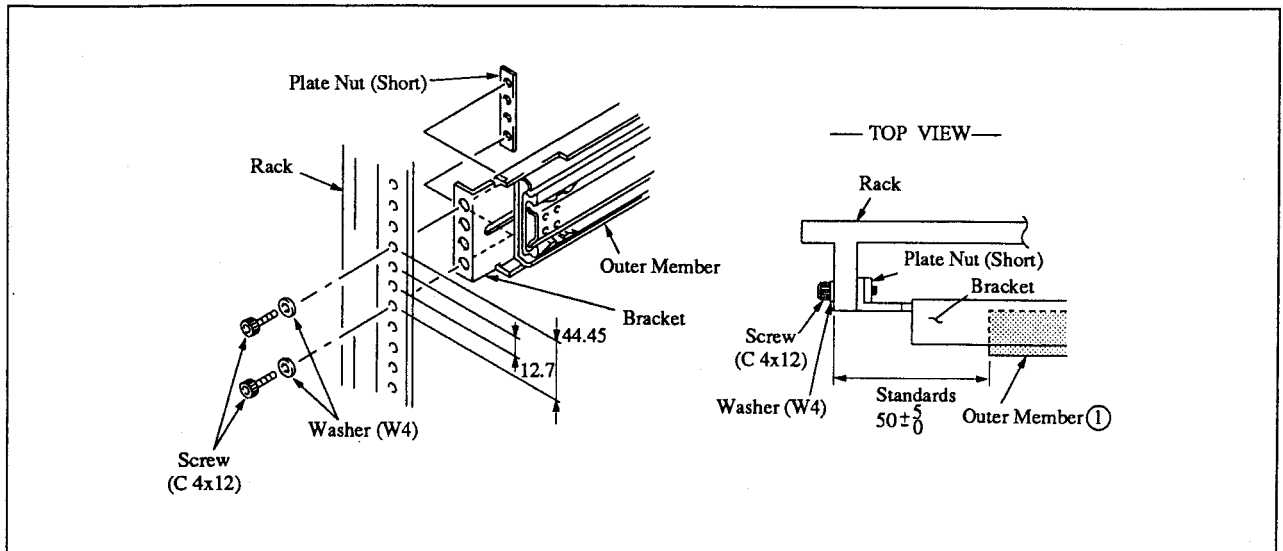
- (2) Fix the inner members to the set using the 16 screws (+B 4x8) supplied as an accessory to the RMM-18DV.
Remove the 2 screws (+PWH 4x8) on the top panel.
Remove the 4 feet of the set as required.



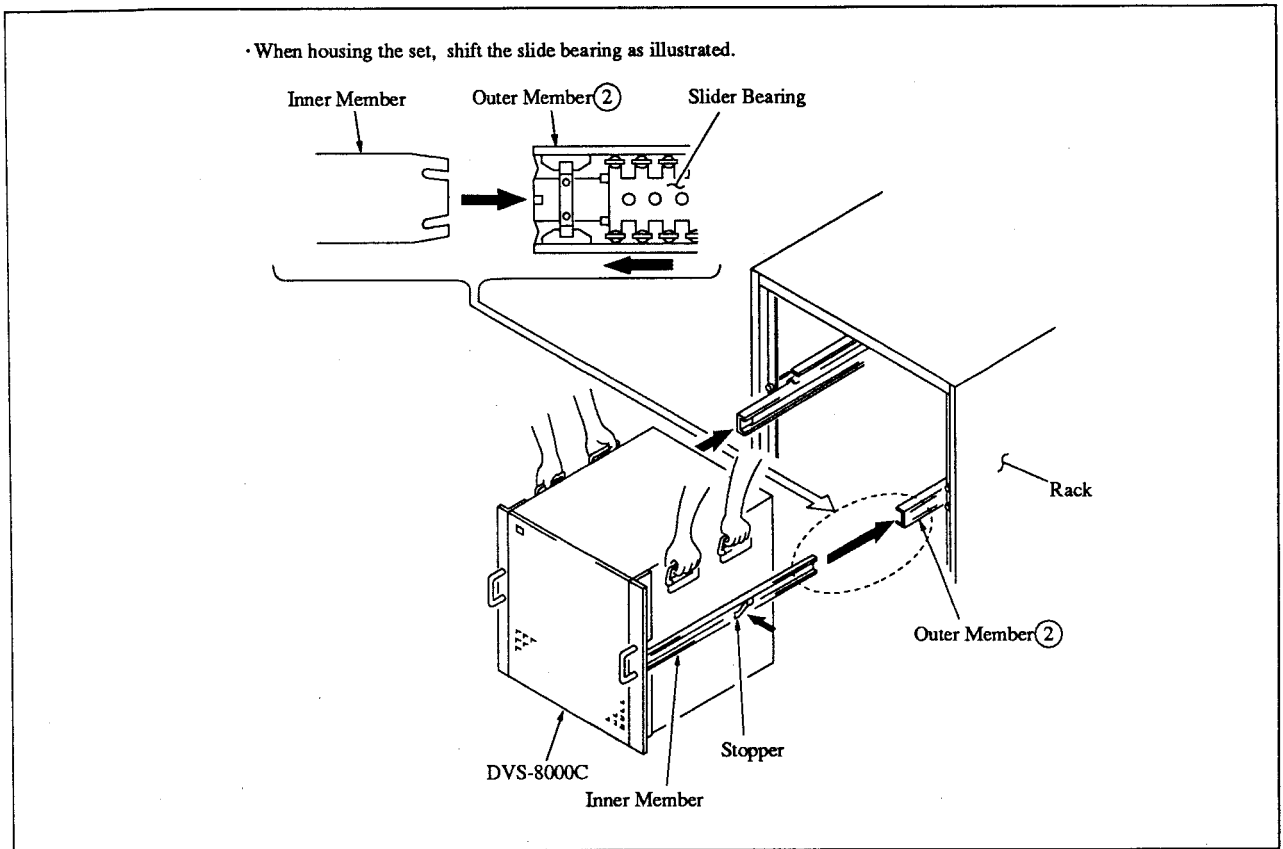
- (3) Fix the brackets to the outer member ① temporarily by using 8 screws (+B 4×8). Move the outer member ② back and forth so that the screw holes of the outer member ① can be seen.



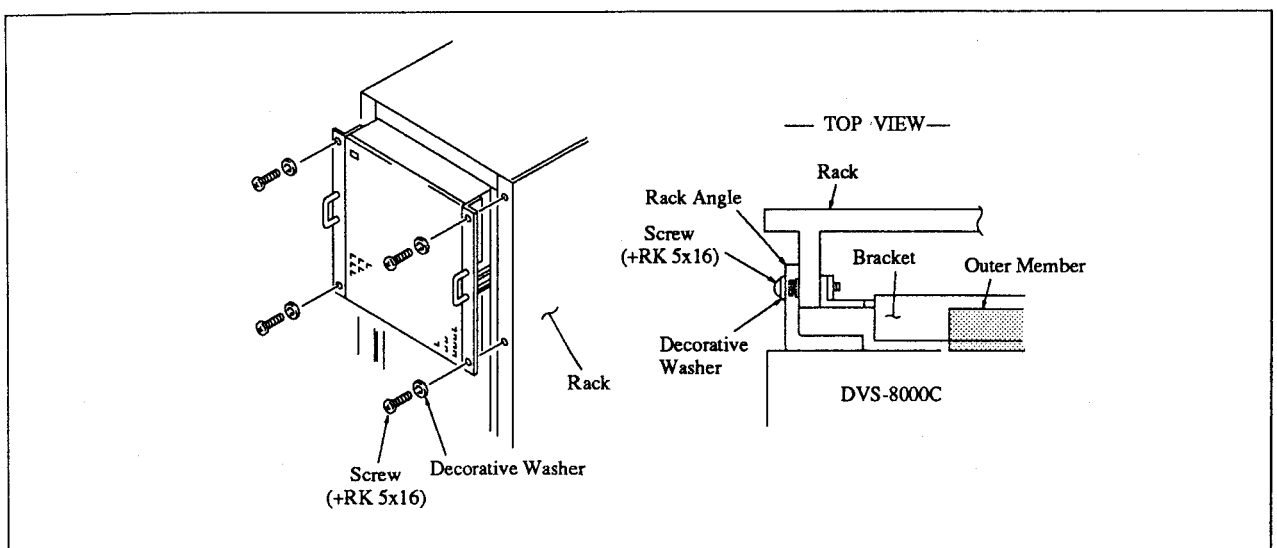
- (4) Fix the outer member assembly to RMM-18DV temporarily by using 4 screws (C 4×12) and 4 washers (W4) supplied as accessories. At this time, adjust the outer member position. After adjusting the outer member position, tighten the screws (+B 4×8) which were locked temporarily in step (3).



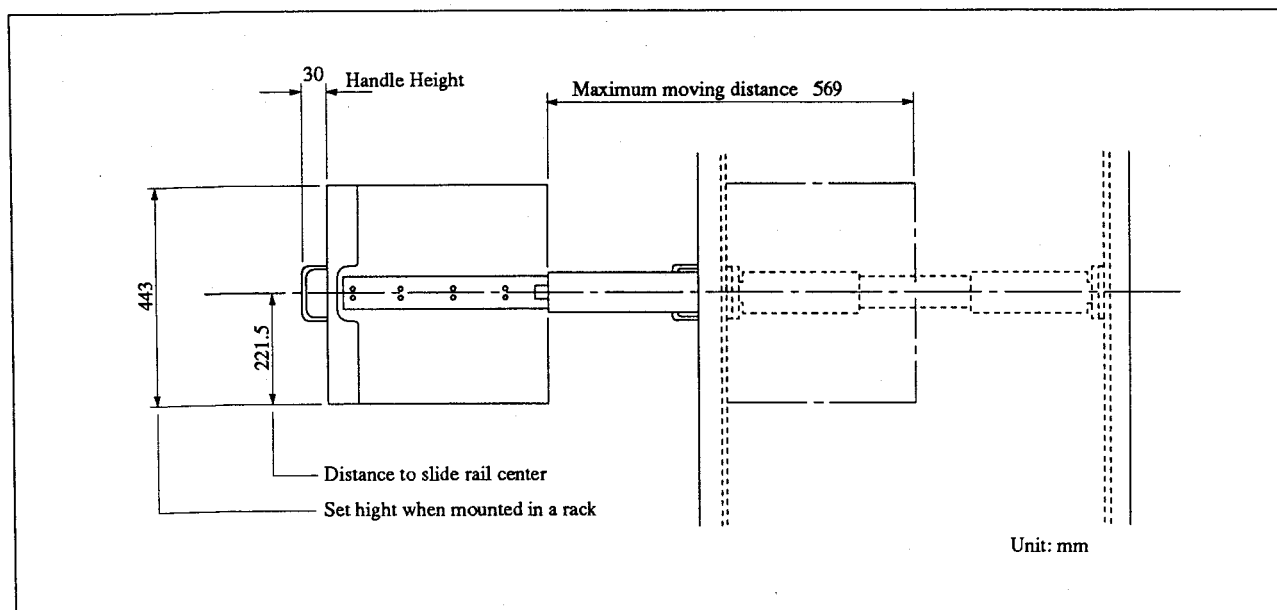
- (5) Before housing the set, release the stoppers of the inner member. After making sure that the set can be housed smoothly, tighten the screws (C 4×12) which were locked temporarily in step (4).



- (6) After housing the set, lock the set to the rack by using 4 screws (+RK 5×16) and 4 decorative washers.



- When DVS-8000C is mounted in a rack, the maximum moving distance is as illustrated below.



2-9. SUPPLIED ACCESSORIES

Parts name	Parts No.	Quantity
Rack angle ASSY (*1)	X-3165-221-2	2
Extension board (EX-209)	A-6279-727-A	1
Power cord (UL, CSA: 125 V/10 A)	1-551-812-11	1
Power cord (UL, CSA: 250 V/10 A)	PENDING	1
Power cord (CEE: 250 V/6 A)	1-556-760-11	1
Adapter (2 PIN) for power cord	1-506-411-21	1
75-ohm terminator	1-569-221-11 2-990-242-01	1 set
Operation and maintenance manual	3-169-258-01	1

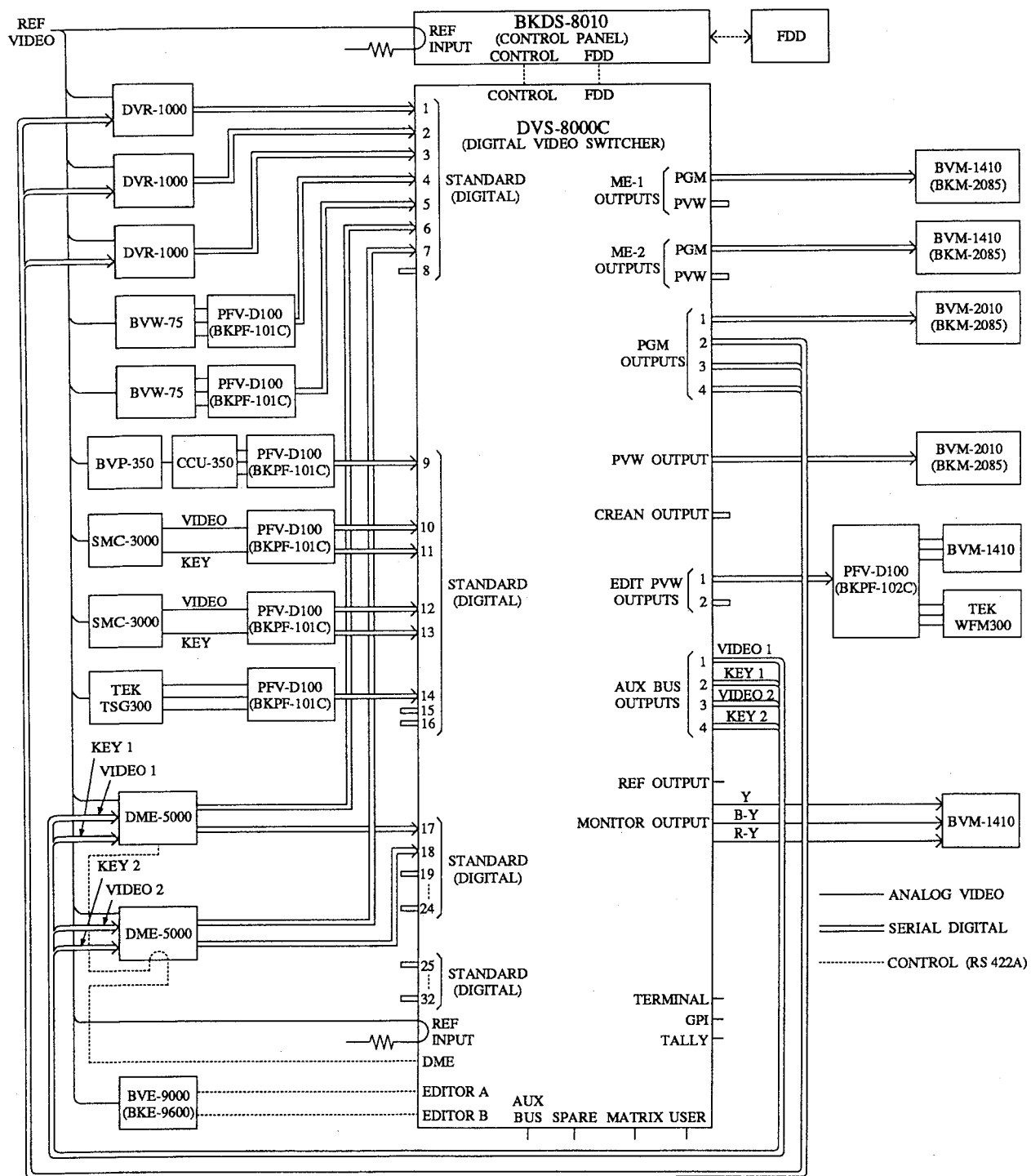
(*1).....The rack angle ASSY has been installed in the set before shipping.

2-10. OPTIONAL ACCESSORIES

The following optional accessories are available for DVS-8000C.

- BKDS-8010 : CONTROL PANEL
- BKDS-8031 : CLEAN CHROMA KEY BOARD (a pair)
- BKDS-8041 : FRAME MEMORY BOARD
- BKDS-8090 : SPARE POWER SUPPLY UNIT

2-11. EXAMPLE OF SYSTEM CONNECTION



SECTION 3 SERVICE INFORMATION

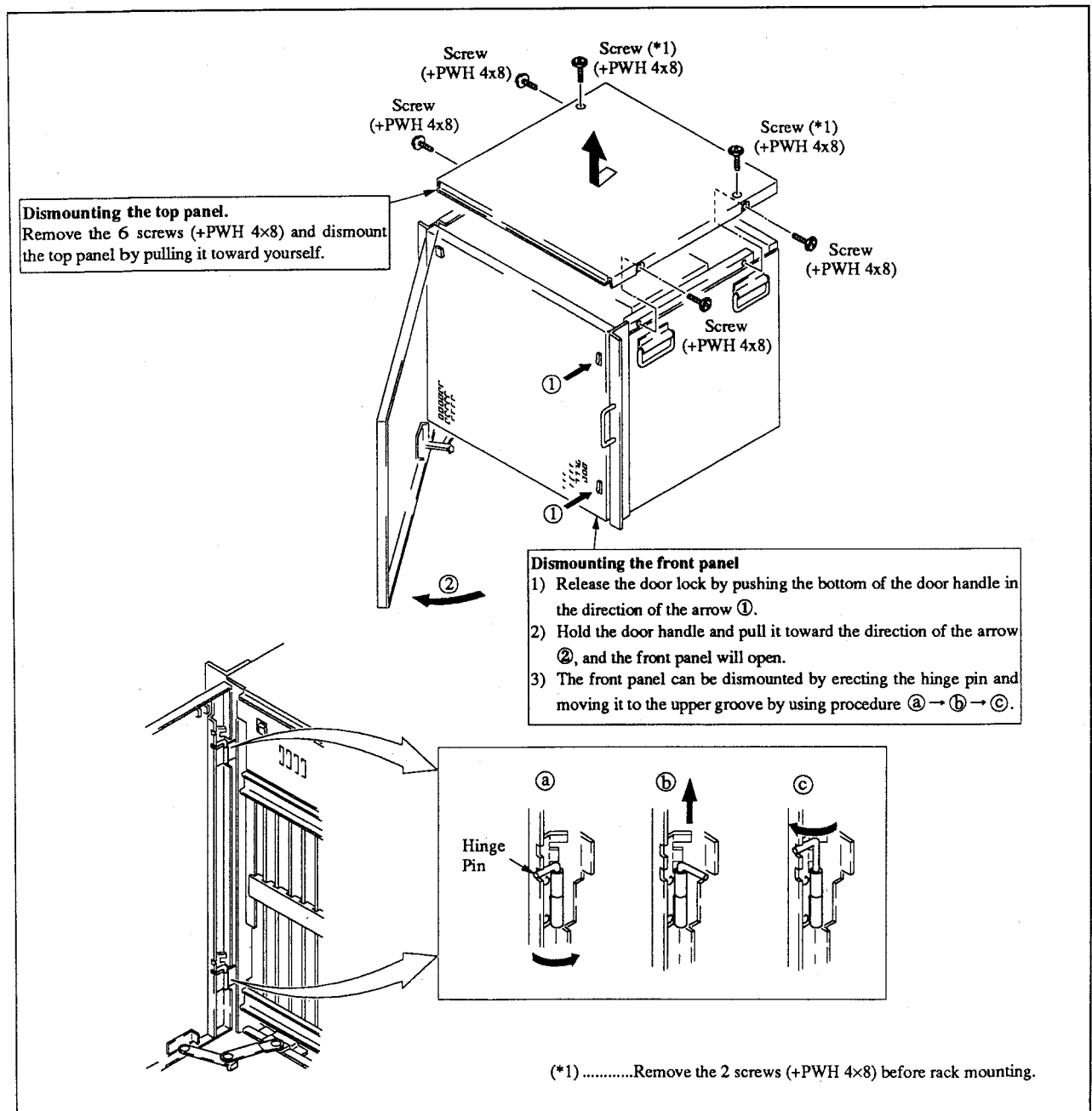
3-1. DISMOUNTING FROM RACK

- Disconnect all the cables of the connector panel and remove the rack mounting screws. Then, pull out the handle of the angle.

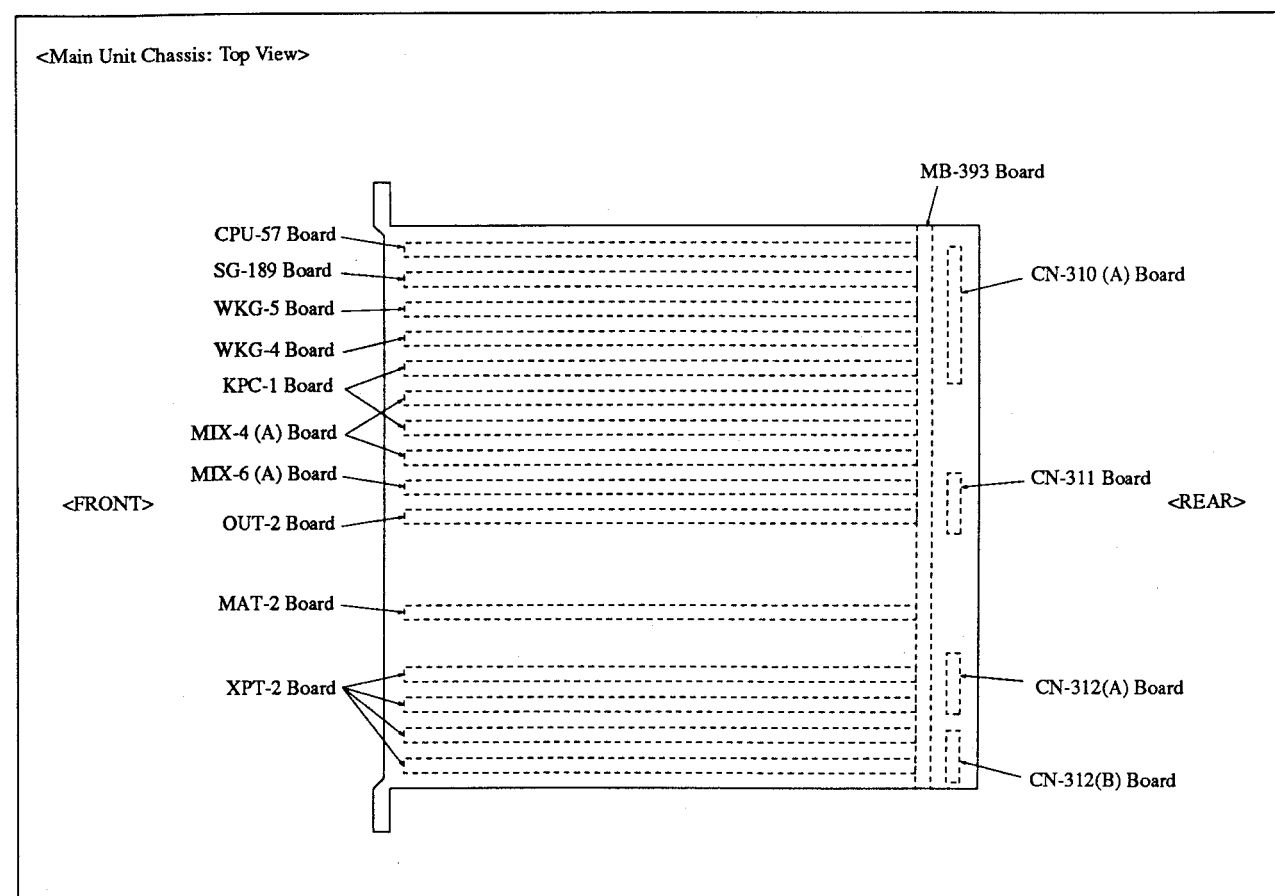
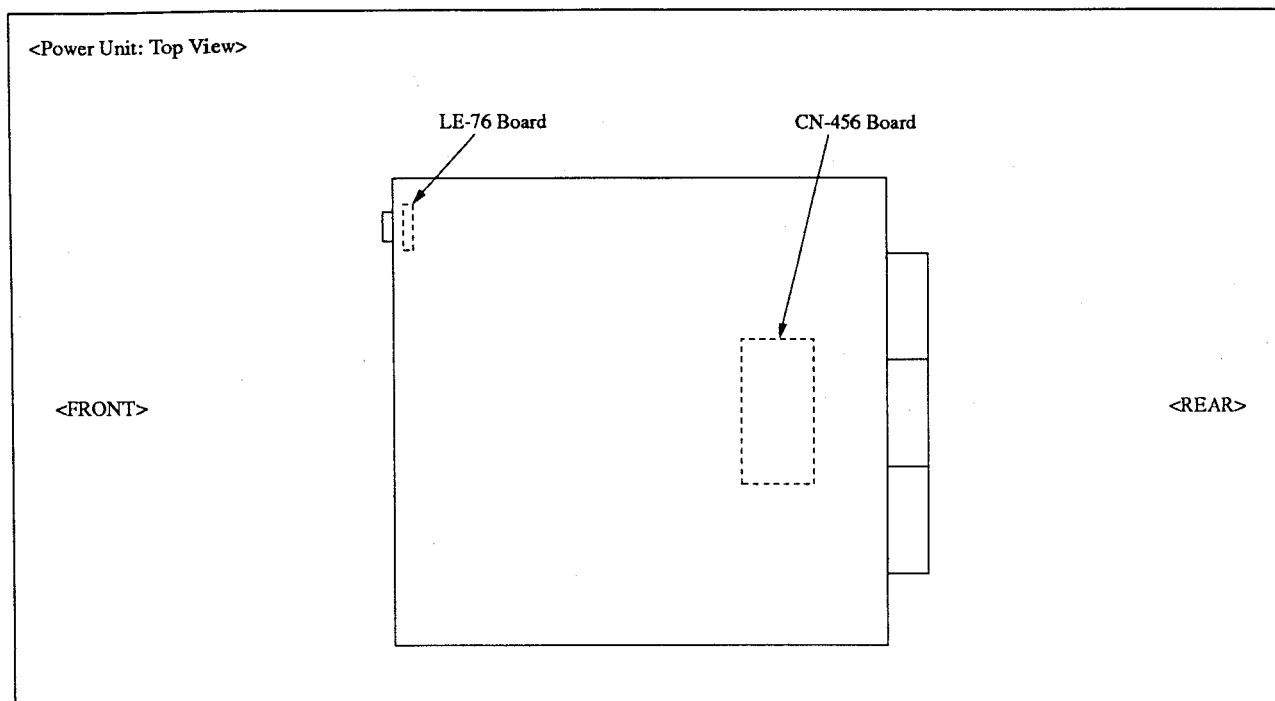
<Note>

At least two men should work together to pull out the set from the rack. This is necessary to prevent falls.

3-2. REMOVAL OF PANELS



3-3. LOCATION OF PRINTED CIRCUIT BOARDS

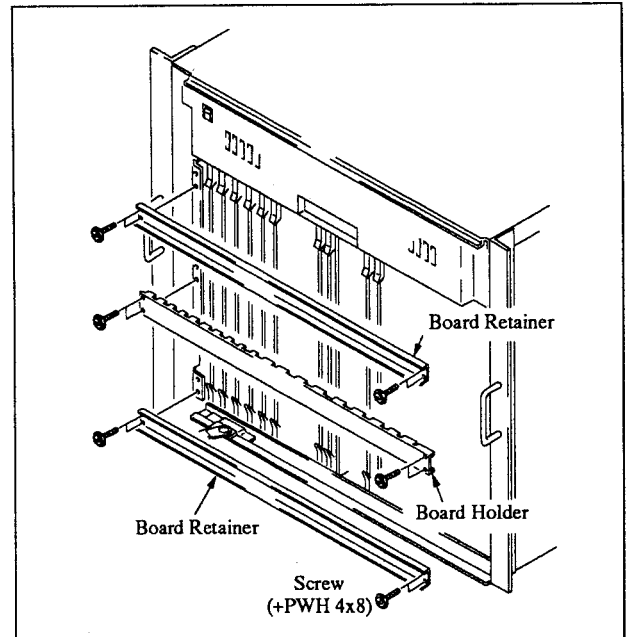


3-4. CIRCUIT INFORMATION

Board name	Function
CPU-57	CPU BOARD
SG-189	SYNC GENERATOR BOARD
WKG-5	ENHANCED WIPE BOARD
WKG-4	BASIC WIPE BOARD
KPC-1	KEY PROCESSOR BOARD
MIX-4 (A)	MIXER BOARD
MIX-6 (A)	DSK (DOWNSTREAM KEYS) BOARD
OUT-2	OUTPUT PROCESSOR BOARD
MAT-2	MATTE GENERATOR BOARD
XPT-2	DIGITAL INPUT BOARD
MB-393	MOTHER BOARD
EX-209	EXTENSION BOARD
CN-310 (A)	CONTROL CONNECTOR BOARD
CN-311	OUTPUT CONNECTOR BOARD
CN-312 (A)	PRIMARY INPUT CONNECTOR BOARD (A)
CN-312 (B)	PRIMARY INPUT CONNECTOR BOARD (B)
CN-456	POWER SUPPLY CONNECTOR BOARD
LE-76	POWER LED BOARD

3-5. HOW TO INSTALL AND REMOVE THE BOARD

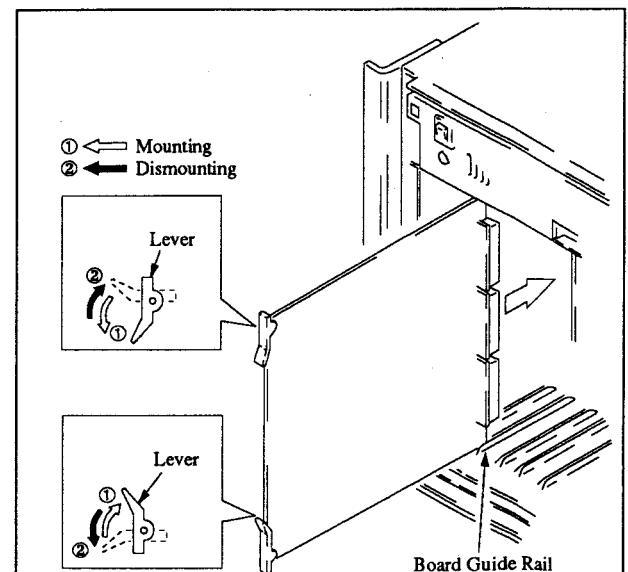
- (1) Remove the front panel by the same procedure as that of 3-2.
- (2) Remove the 12 screws (+PWH 4x8) which lock the 2 board retainer and the board holder (x1).



- (3) Insert a board along the board guide rail. The board can be mounted by pushing the board lever in the direction of the arrow ① while pushing the board.
- (4) It can be dismounted by pushing the board lever in the direction of the arrow ② and pulling it toward yourself.

<Note>

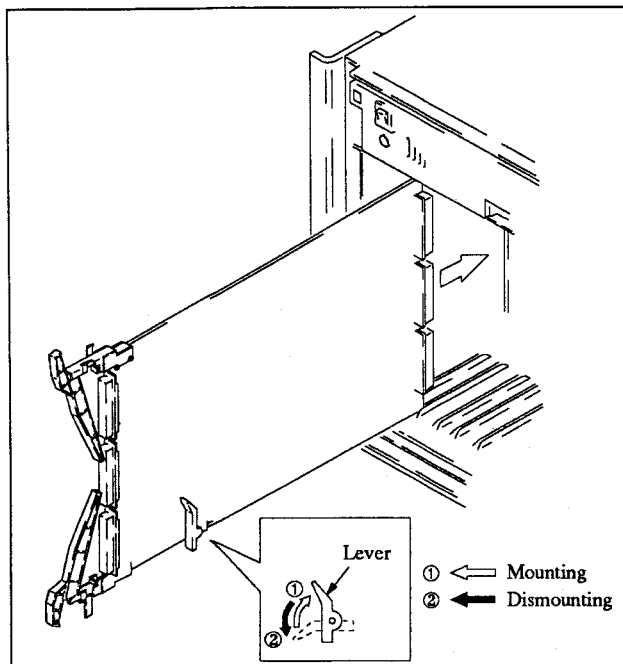
After mounting a board, make sure that the connector is tightly connected to the MB-393 board.



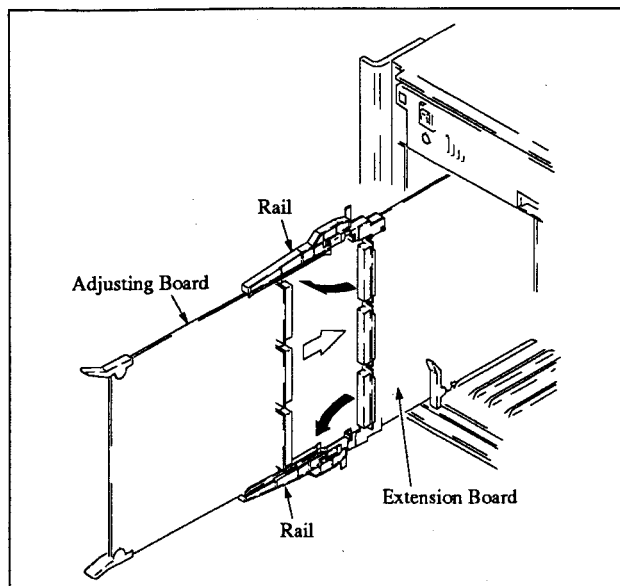
3-6. HOW TO USE THE EXTENSION BOARD

EX-209 extension board (used for adjusting card board)

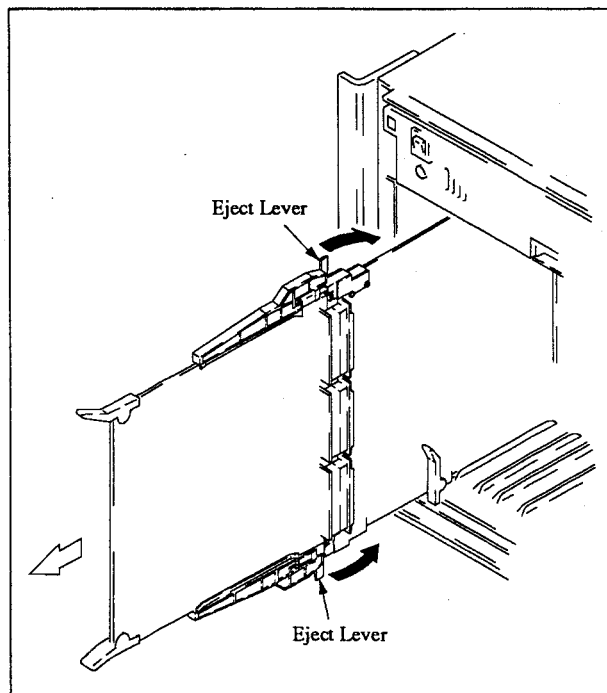
- (1) Pull out the board to be adjusted by following the instructions in 3-5. How to Install and Remove the Board.
- (2) Insert an extension board into the slot and lock it firmly by pressing the board lever.



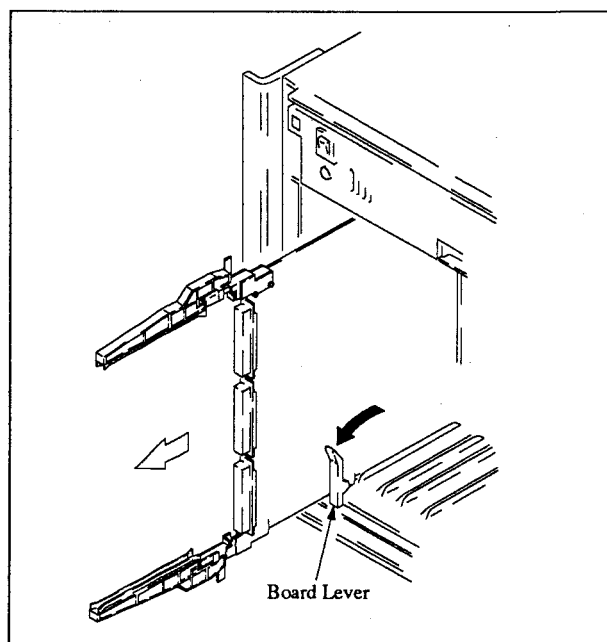
- (3) Open the rail of the extension board. (Open it completely until it is locked.) Insert the board to be adjusted along the rail of the extension board and adjust the board.



- (4) After adjusting the board, push the eject lever in the direction of the arrow and pull out the adjusted board toward yourself.



- (5) Push the board lever in the direction of the arrow and pull out the extension board by pulling it toward yourself.



3-7. SERVICE PARTS

(1) Safety Related on Components Warning

Components with Δ on the schematic diagrams, exploded views and electrical spare parts list are to maintain safe operation. Replace these components with Sony parts specified in this manual or in service manual supplements published by Sony.

(2) Standardization of Parts

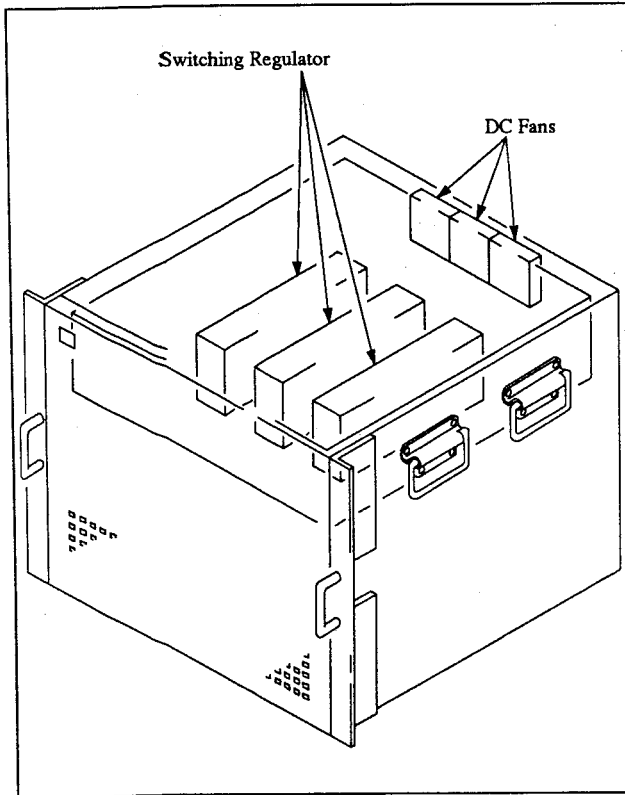
Replacement Parts supplied from Sony Parts Center may sometimes have different shape and outside view from the parts which actually in use. This is due to "standardization of genuine parts". This manual's exploded view and electrical spare parts list are indicating the part numbers of "the standardized genuine parts at present".

(3) Stocked of Parts

The parts marked with "s" in the SP column of the exploded views and electrical spare parts lists are normally stocked for customer's inquiry. However, orders for parts, marked with "o" may not be ready which require additional delivery time when ordered.

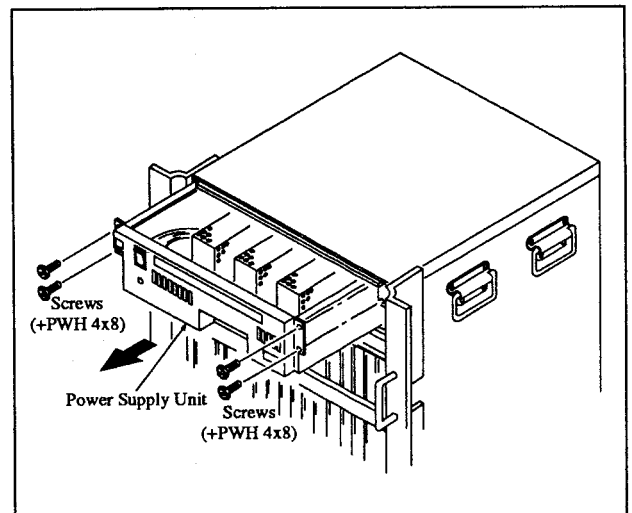
SECTION 4 REPLACEMENT OF MAIN PARTS

4-1. LOCATION OF THE MAIN PARTS

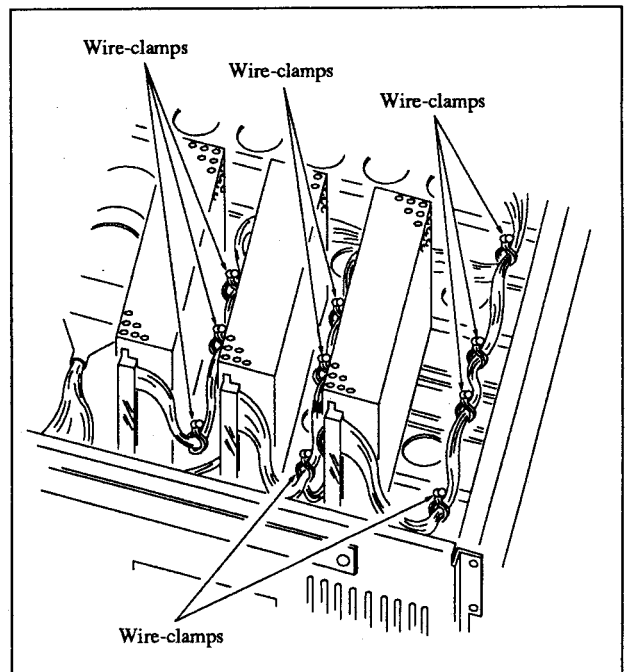


4-2. REPLACEMENT OF THE SWITCHING REGULATORS

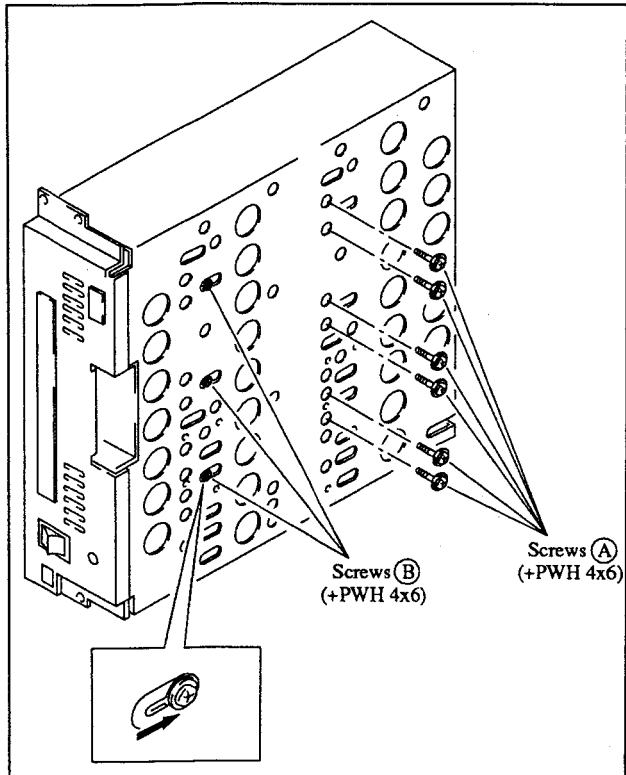
- (1) Remove the front panel by the same procedure as that of 3-2.
- (2) Remove the 4 screws (+PWH 4x8) and pull the power supply unit towards the front.



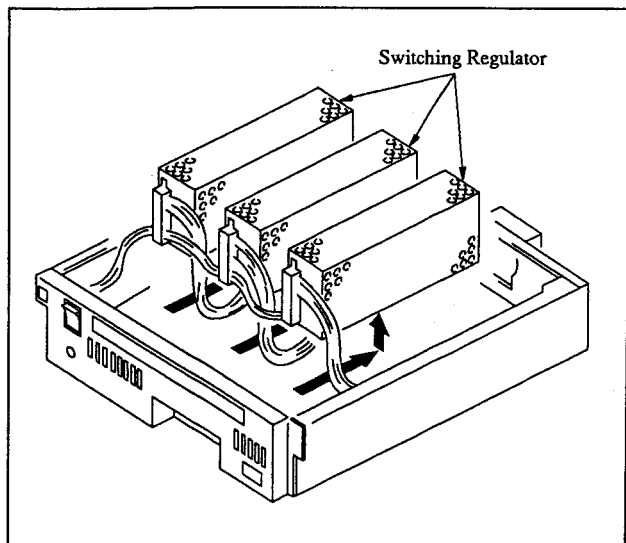
- (3) Remove the harness from the 10 wire-clamps.



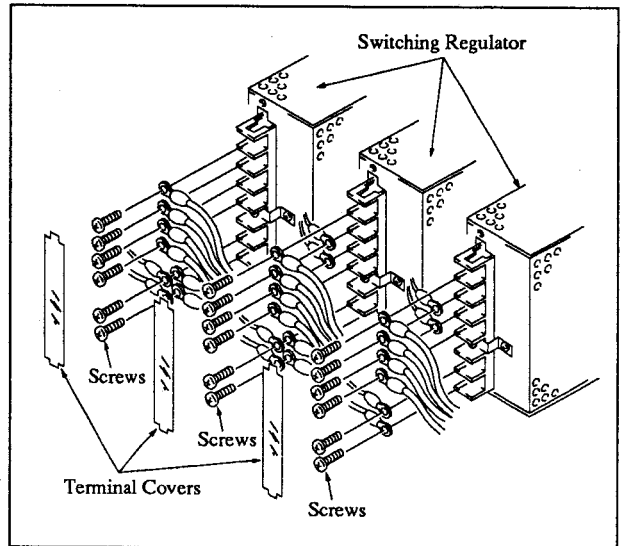
- (4) Remove the 6 screws **A** (+PWH 4x6) and loosen the 3 screws **B** (+PWH 4x6).



- (5) Lift up the switching regulator while pushing it towards the back.



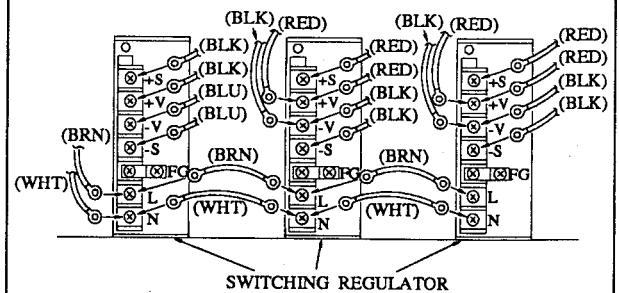
- (6) Remove the terminal covers of the switching regulator and the six set screws, and then remove the harness.



- (7) Remove the switching regulator.
(8) Install a new switching regulator in the reverse sequence of procedures (1) through (7).

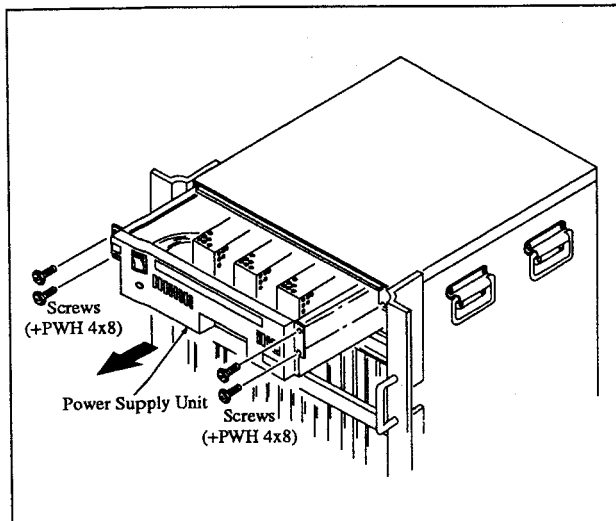
< Note > See the following drawing for details of the harness connection.

(view from the front side)

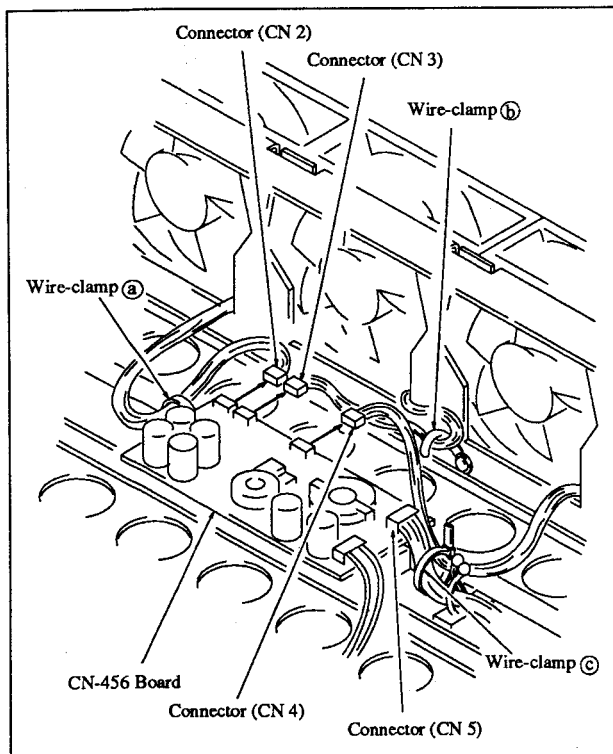


4-3. REPLACEMENT OF THE DC FAN

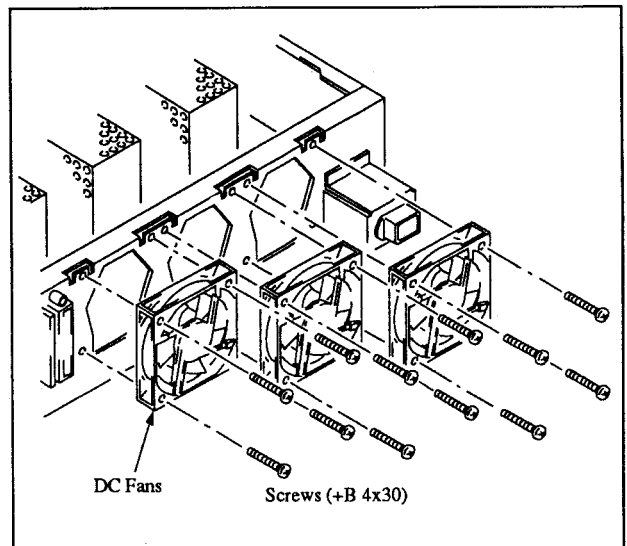
- (1) Remove the front panel by the same procedure as that of 3-2.
- (2) Remove the 4 screws (+PWH 4×8) and pull the power supply unit towards the front.



- (3) Remove the harness from the 2 wire-clamps ① and ②.
- (4) Cut off the wire-clamp ③ that connects connector (CN4) and connector (CN5).
- (5) Remove the 3 connectors (CN2, CN3, and CN4) on the CN-456 board.



- (6) Remove the 4 screws (+B 4×30) of the DC fans, and then remove the fans.



- (7) Install new DC fans in the reverse sequence of procedures (1) through (6).

<Note>

- (1) Fasten the harnesses of CN4 and CN5 with a wire-clamp that is equivalent to the wire-clamp ③ that was cut off in (4) so that the harness of the fan motor does not touch the fan blade.
- (2) Apply "screw-lock" to the head of the set screws (+B 4×30) of the fan after new DC fans are installed (to prevent the loosening of screws).

SECTION 6 ELECTRICAL ALIGNMENT

6-1. SG-189 Board

RV401 MONITOR Y OUTPUT GAIN
 RV402 MONITOR Y OUTPUT OFFSET
 CV401 MONITOR Y OUTPUT
 FREQUENCY RESPONSE
 RV701 MONITOR Y OUTPUT SYNC GAIN

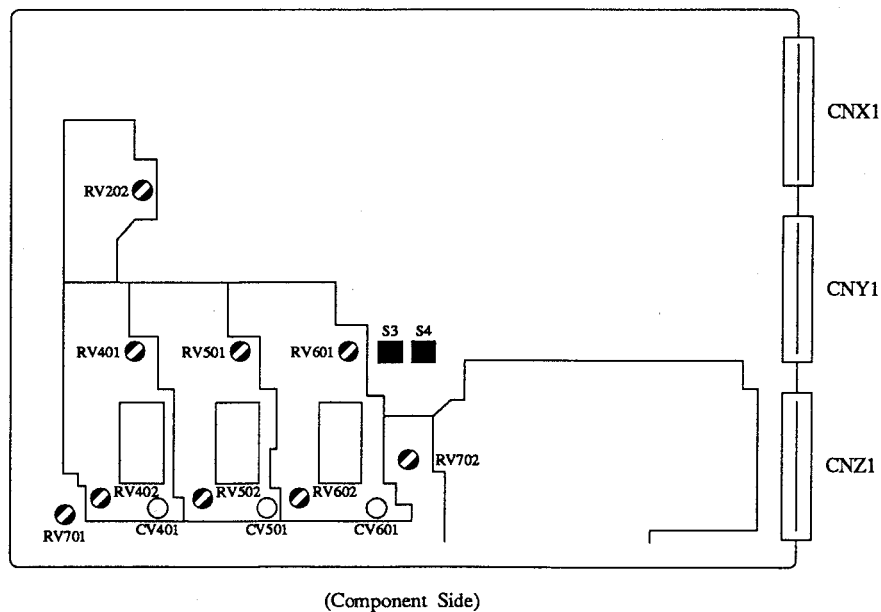
RV501 MONITOR B-Y OUTPUT GAIN
 RV502 MONITOR B-Y OUTPUT OFFSET
 CV501 MONITOR B-Y OUTPUT
 FREQUENCY RESPONSE

RV601 MONITOR R-Y OUTPUT GAIN
 RV602 MONITOR R-Y OUTPUT OFFSET
 CV601 MONITOR R-Y OUTPUT
 FREQUENCY RESPONSE

S3 MONITOR B-Y PHASE ADJUST
 S4 MONITOR R-Y PHASE ADJUST

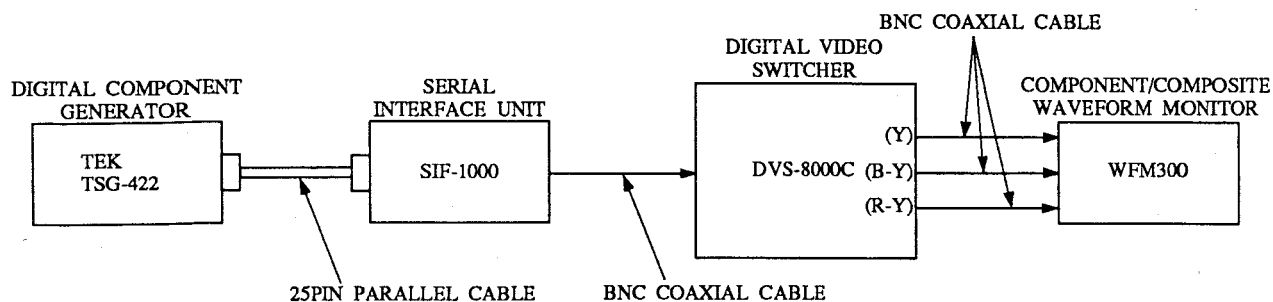
RV702 REF OUTPUT GAIN

RV202 D/A GAIN



6-1-1. Monitor Output Adjustment

<Connection>



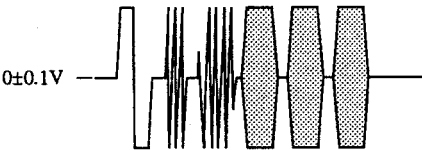
6-1-1-1. Y Level Adjustment

Conditions of adjustment	Specifications	Adjustment
<ul style="list-style-type: none"> Enter a multiburst signal into the PRIMARY INPUT terminal of the rear panel. Select MULTI BURST for PVW BUS on the control panel BKDS-8010. 	<p>MONITOR Y OUTPUT terminal</p> <p>560±10mV</p> <p>0±0.1V</p> <p>300±10mV</p> <p>※ Frequency characteristics : 0~5 MHz (0±0.5 dB)</p>	<p>Sync level adjustment</p> <p>●RV701</p> <p>Pedestal level adjustment</p> <p>●RV402</p> <p>Video gain adjustment</p> <p>●RV401</p> <p>Adjustment of frequency characteristics</p> <p>○CV401</p>

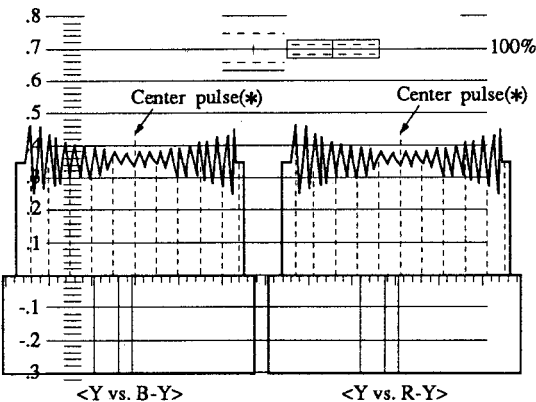
6-1-1-2. B-Y Level Adjustment

Conditions of adjustment	Specifications	Adjustment
<ul style="list-style-type: none"> Enter a multiburst signal into the PRIMARY INPUT terminal of the rear panel. Select MULTI BURST for PVW BUS on the control panel BKDS-8010. 	<p>MONITOR B-Y OUTPUT terminal</p> <p>210±5mV</p> <p>0±0.1V</p> <p>210±5mV</p> <p>※ Frequency characteristics : 0~2 MHz (0±0.5 dB)</p>	<p>Pedestal level adjustment</p> <p>●RV502</p> <p>Video gain adjustment</p> <p>●RV501</p> <p>Adjustment of frequency characteristics</p> <p>○CV501</p>


6-1-1-3. R-Y Level Adjustment

Conditions of adjustment	Specifications	Adjustment
<ul style="list-style-type: none"> • Enter a multiburst signal into the PRIMARY INPUT terminal of the rear panel. • Select MULTI BURST for PVW BUS on the control panel BKDS-8010. 	<p>MONITOR R-Y OUTPUT terminal</p>  <p>※ Frequency characteristics : 0~2 MHz (0±0.5 dB)</p>	<p>Pedestal level adjustment</p> <p>● RV602</p> <p>Video gain adjustment</p> <p>● RV601</p> <p>Adjustment of frequency characteristics</p> <p>○ CV601</p>

6-1-1-4. B-Y, R-Y Phase Adjustment

Conditions of adjustment	Specification	Adjustment
<ul style="list-style-type: none"> • Enter a BOWTIE signal (500 MHz) into the PRIMARY INPUT terminal of the rear panel. • Select BOWTIE signal for PVW BUS on the control panel BKDS-8010. • Set the waveform monitor (EX. WFM 300) to BOWTIE mode, then input the monitor Y, B-Y and R-Y signals to the monitor. 	<p>MONITOR Y, B-Y, R-Y OUTPUT terminal BOWTIE MODE</p>  <p>※ Adjust the skew will be nearest to the center pulse.</p>	<p>B-Y Phase adjustment</p> <p><input type="checkbox"/> S3</p> <p>R-Y Phase adjustment</p> <p><input type="checkbox"/> S4</p>

6-1-2. SYNC Level Adjustment (REF OUTPUT)

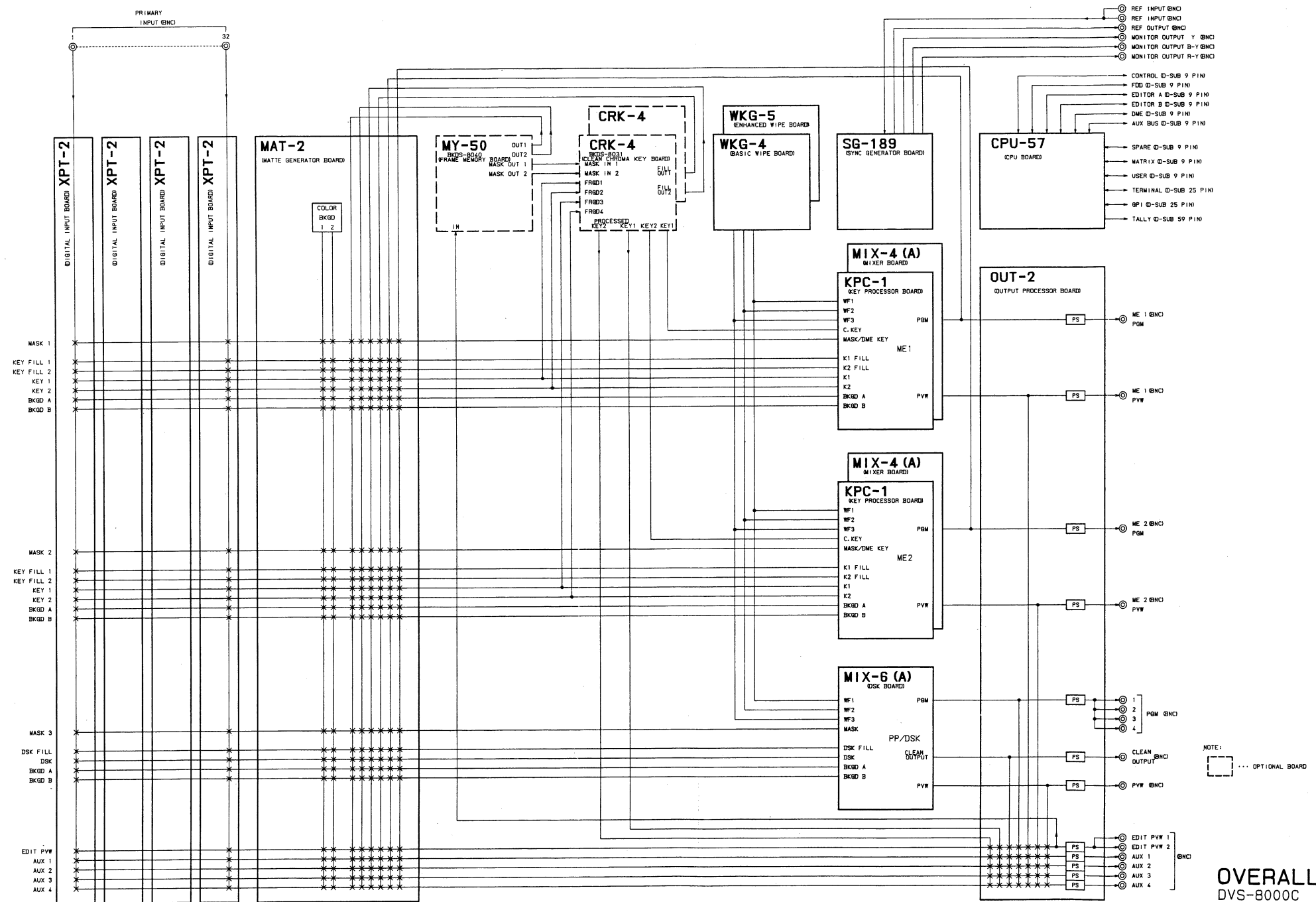
Conditions of adjustment	Specifications	Adjustment
<ul style="list-style-type: none"> Enter a multiburst signal into the PRIMARY INPUT terminal of the rear panel. 	<p>REF OUTPUT terminal</p> 	<p>SYNC level adjustment</p> <p>RV702</p>

6-1-3. D/A Gain Adjustment (D/A OUTPUT)

Conditions of adjustment	Specifications	Adjustment
	Adjust to the mechanical center.	<p>D/A gain adjustment</p> <p>RV202</p>

SECTION 7 BLOCK DIAGRAMS

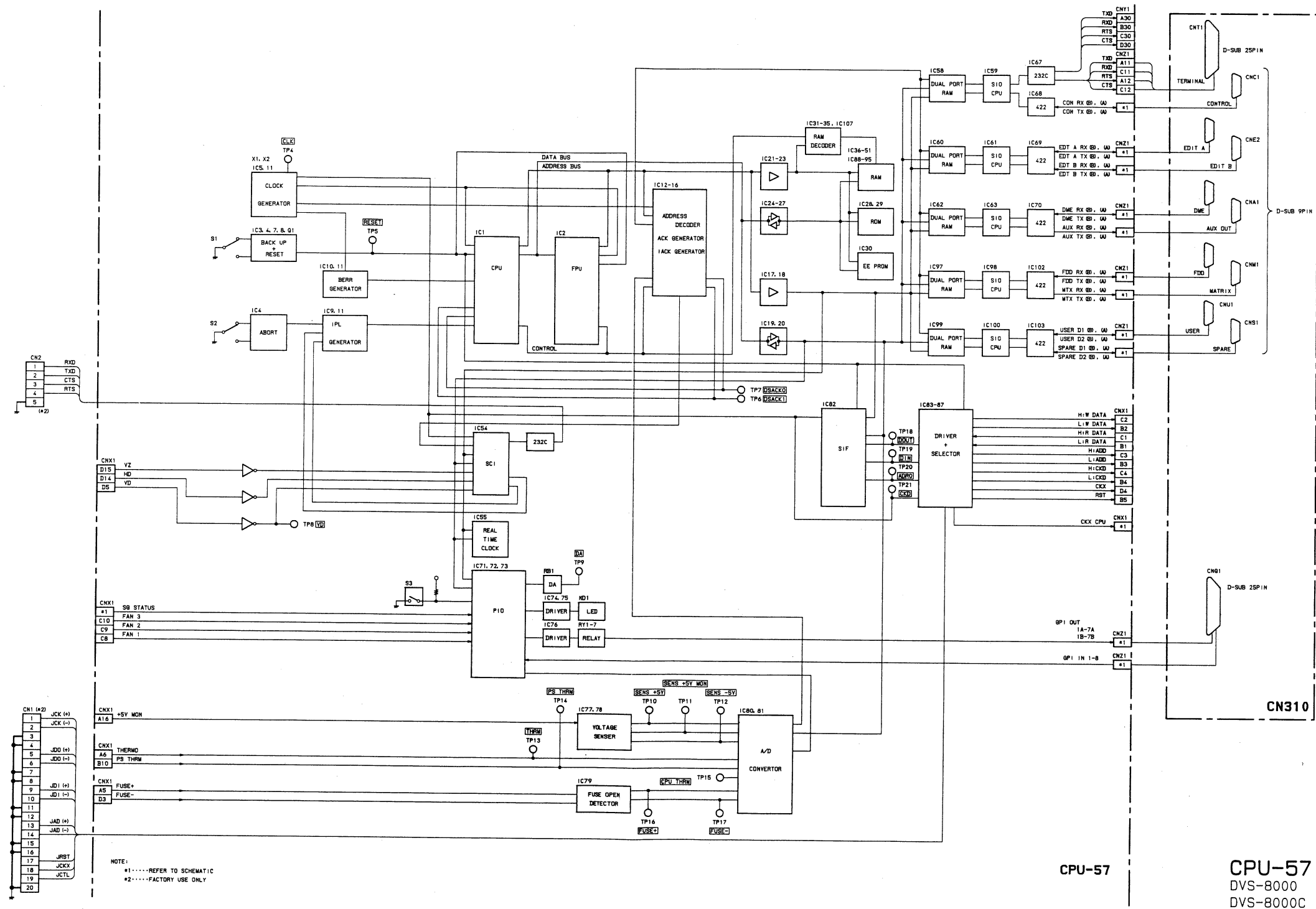
OVERALL



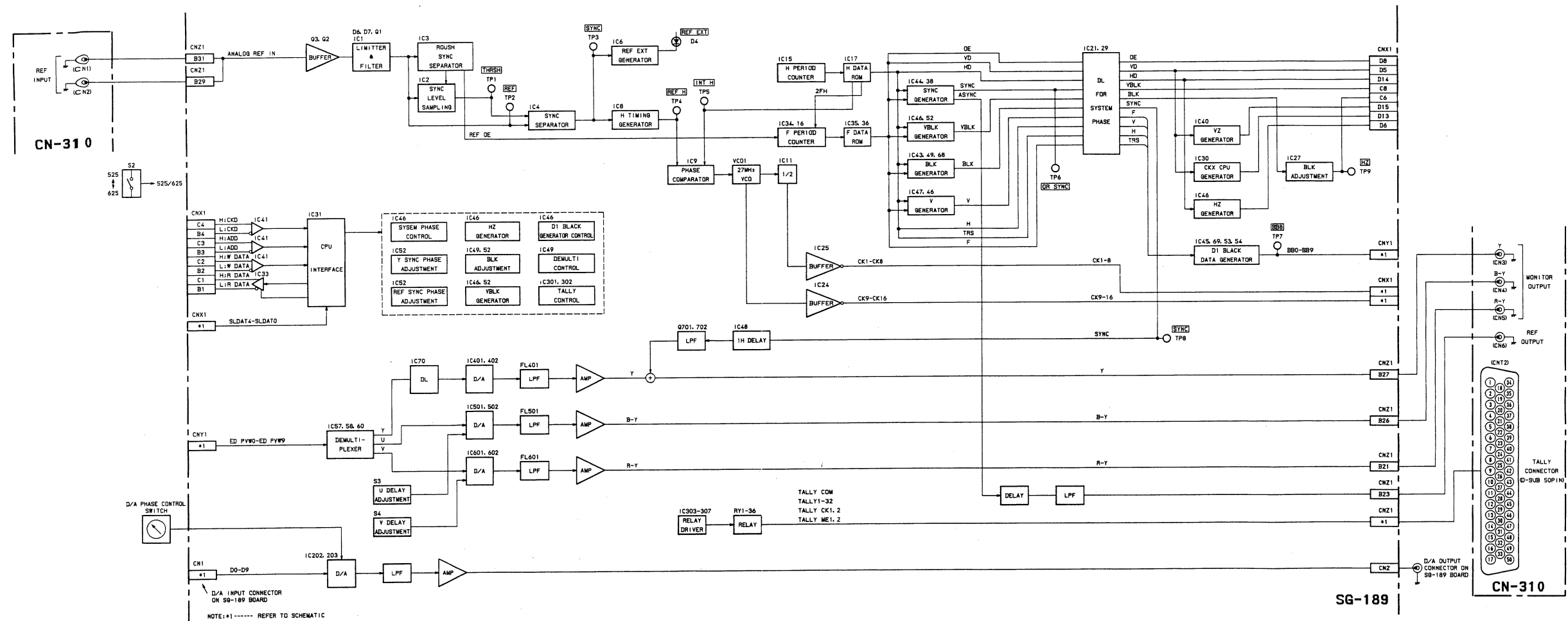
OVERALL
DVS-8000C

CPU-57 CPU-57

CPU BOARD



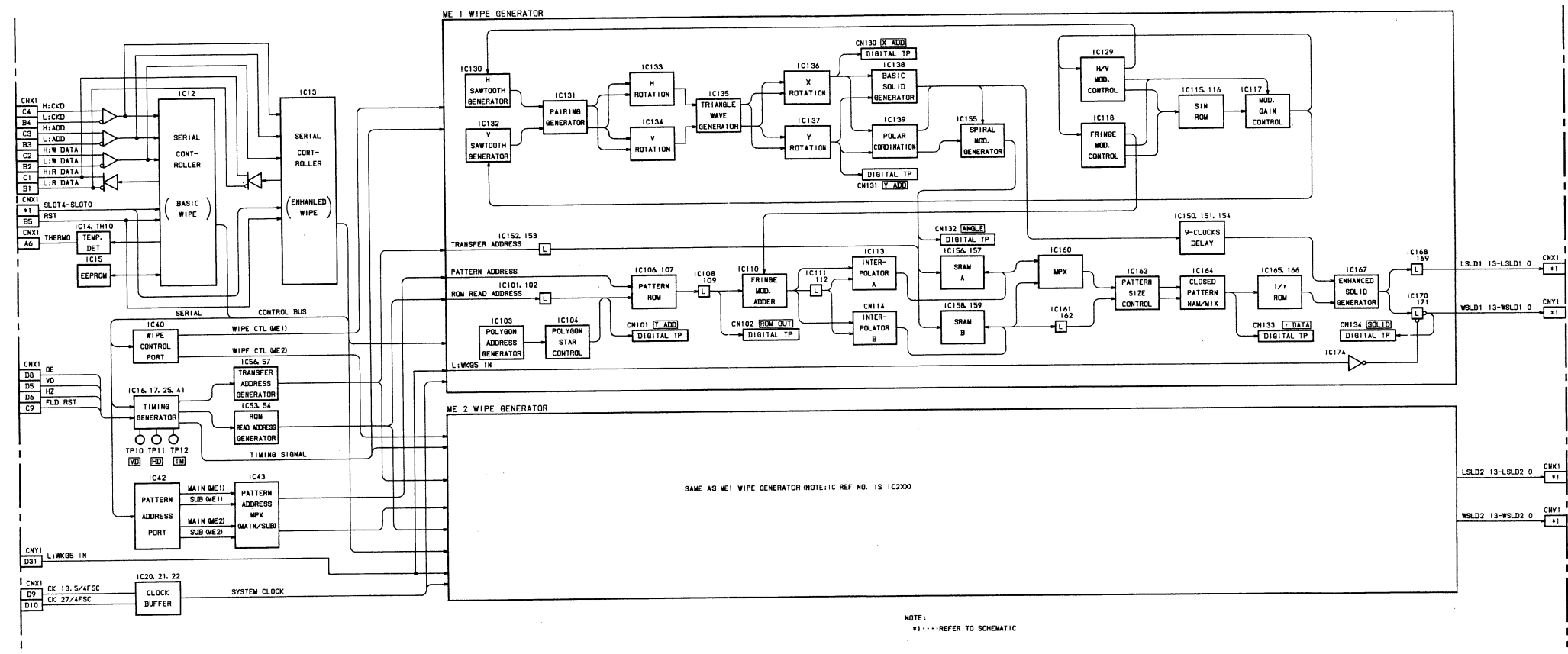
SYNC GENERATOR BOARD



SG-189
DVS-8000C

WKG-4 WKG-4

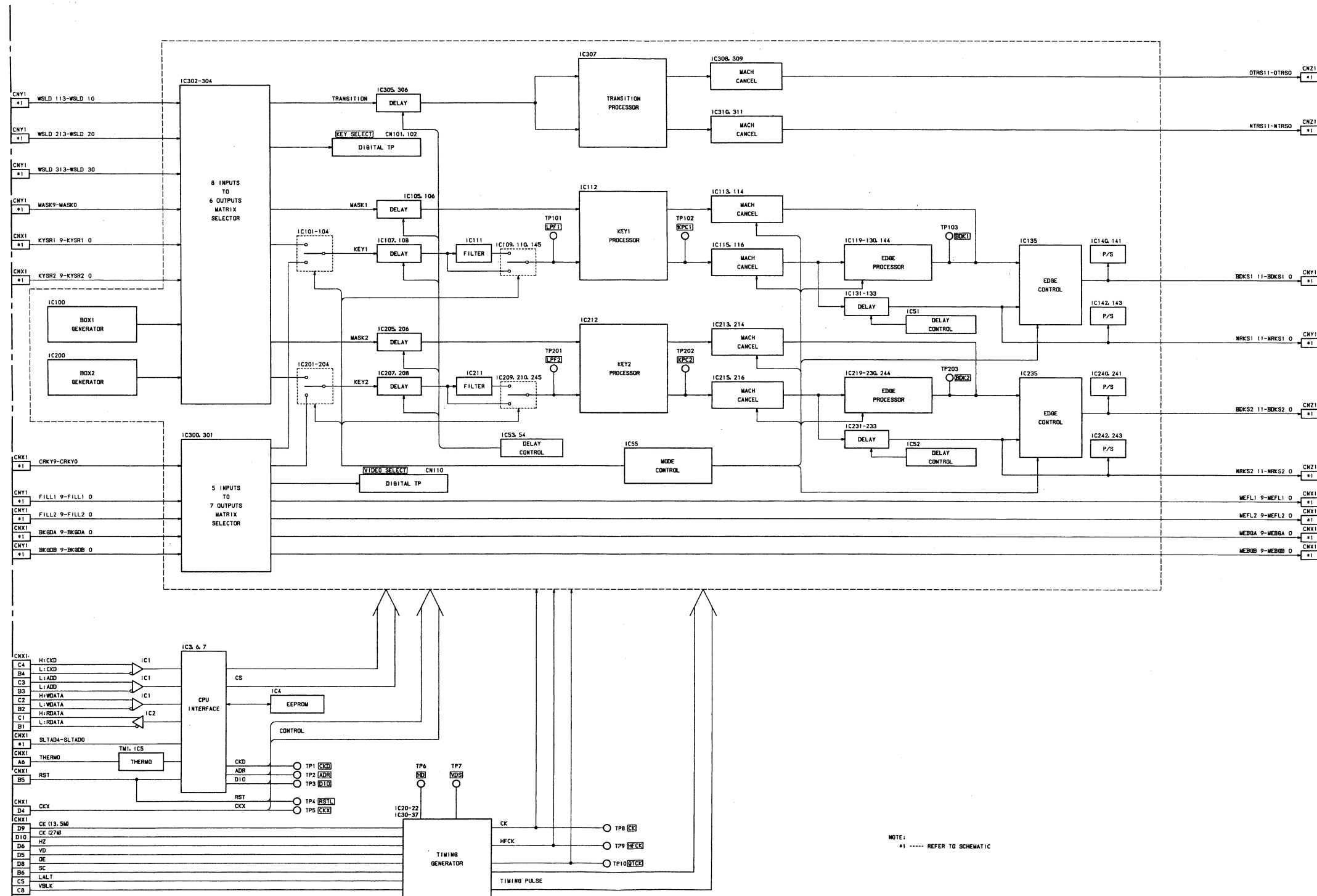
BASIC WIPE BOARD



WKG-4
DVS-8000
DVS-8000C

KPC-1 KPC-1

KEY PROCESSOR BOARD

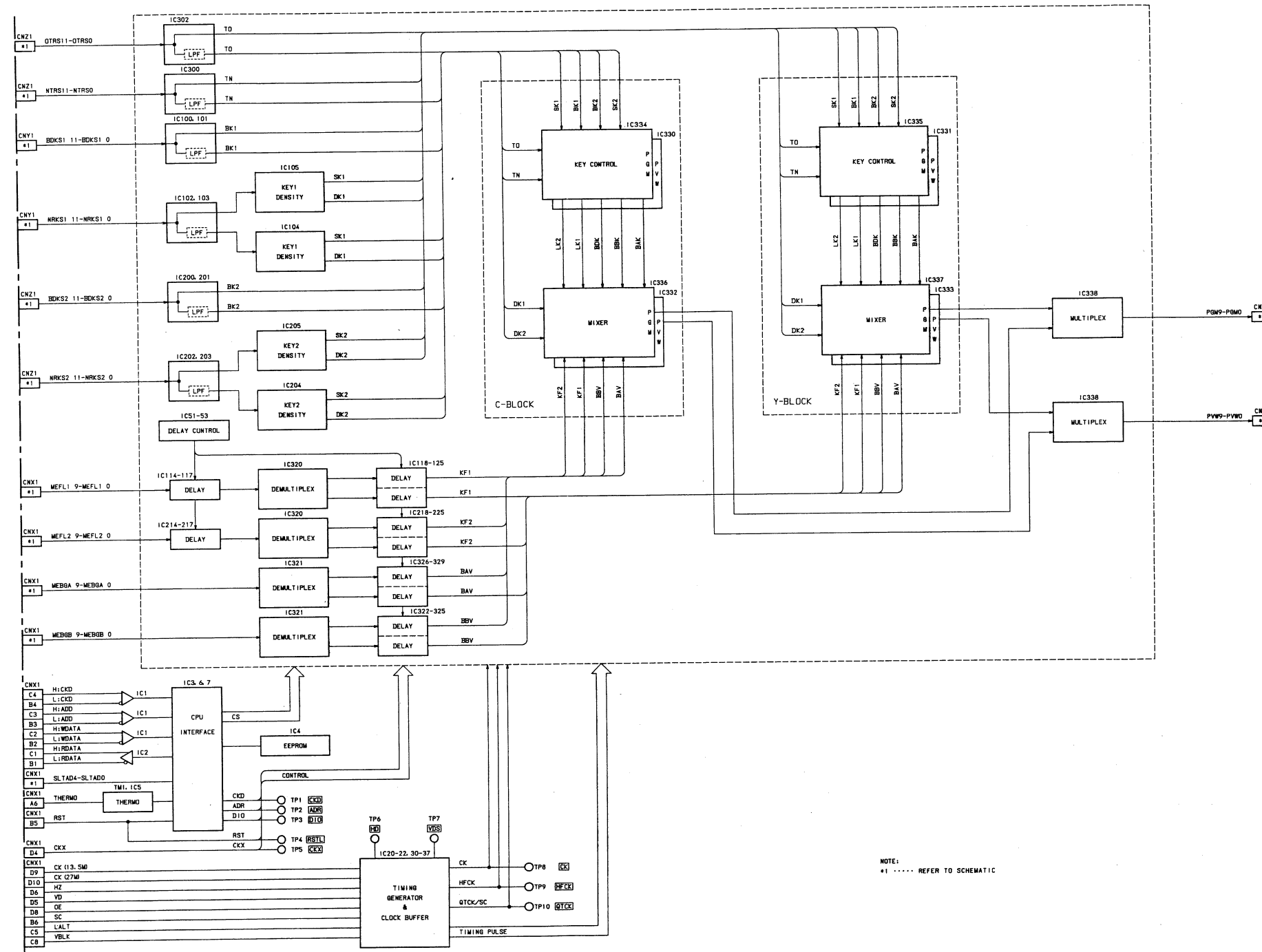


KPC-1
DVS-8000
DVS-8000C

MIXER BOARD

MIX-4
MIX-4 (A)

MIX-4
MIX-4 (A)

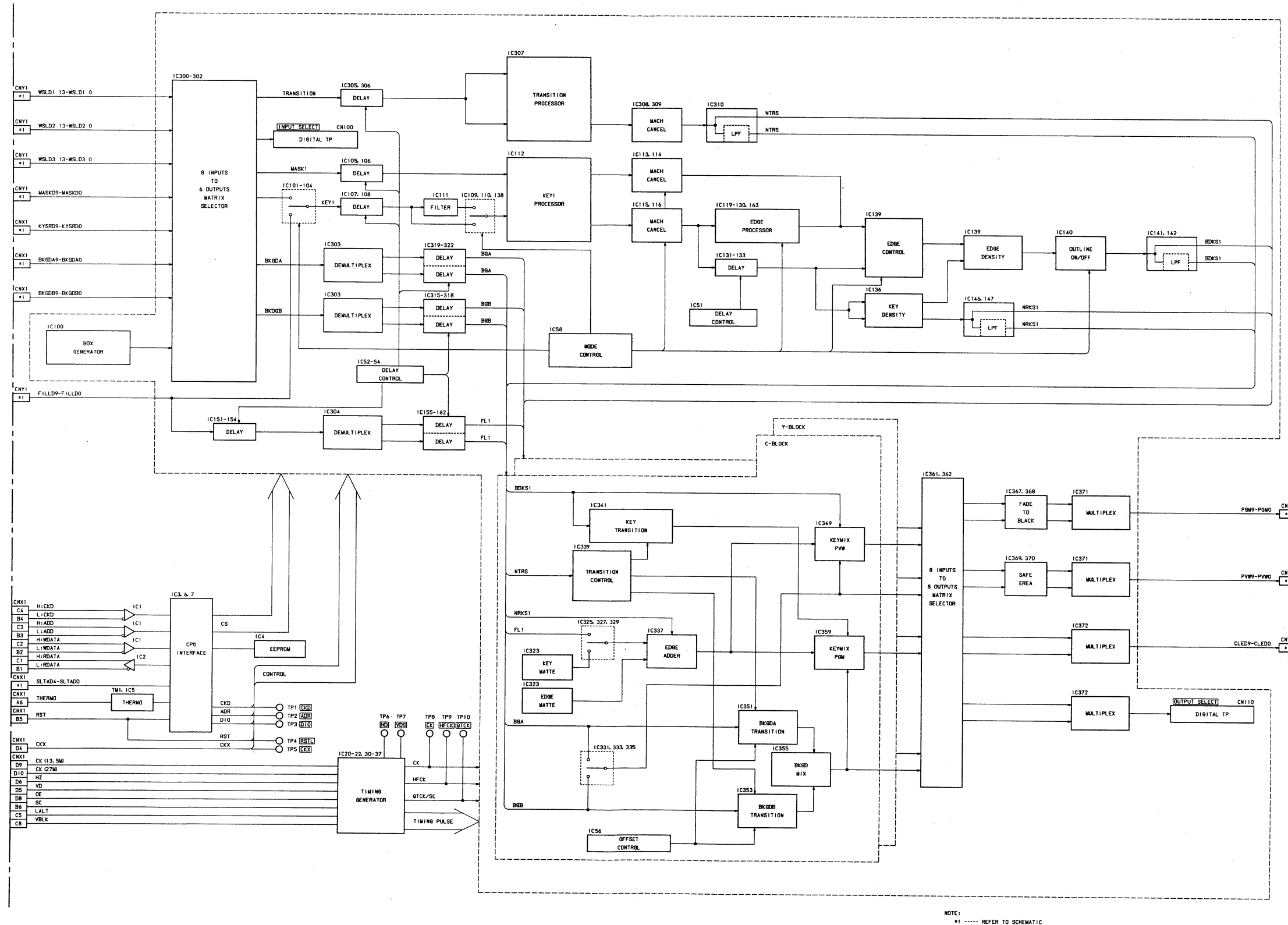


NOTE:
*1 REFER TO SCHEMATIC

MIX-4
DVS-8000
MIX-4 (A)
DVS-8000C

MIX-6	MIX-6
MIX-6 (A)	MIX-6 (A)

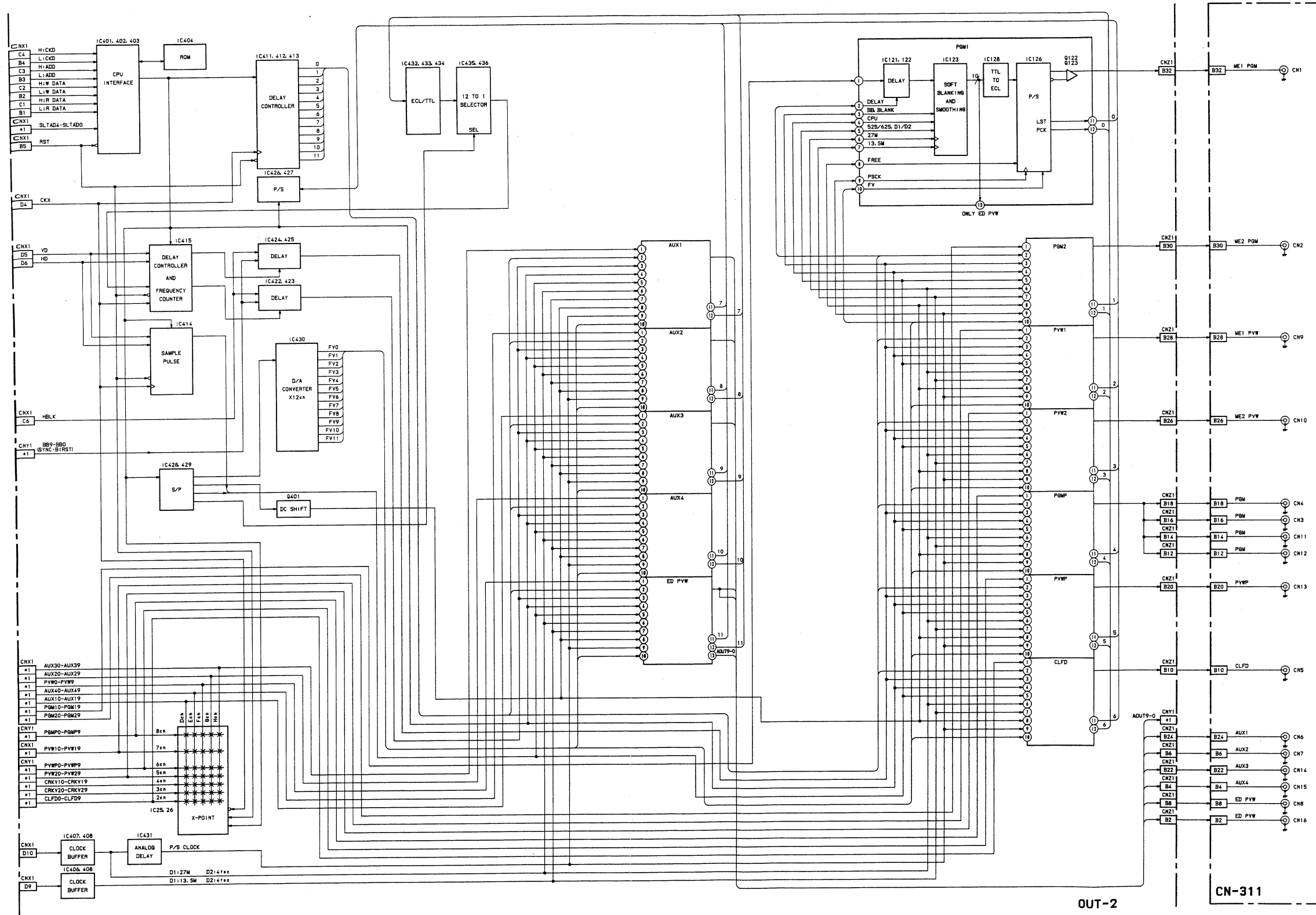
DSK (DOWNSTREAM KEYS) BOARD



MIX-6
DVS-8000
MIX-6 (A)
DVS-8000C

OUT-2 OUT-2

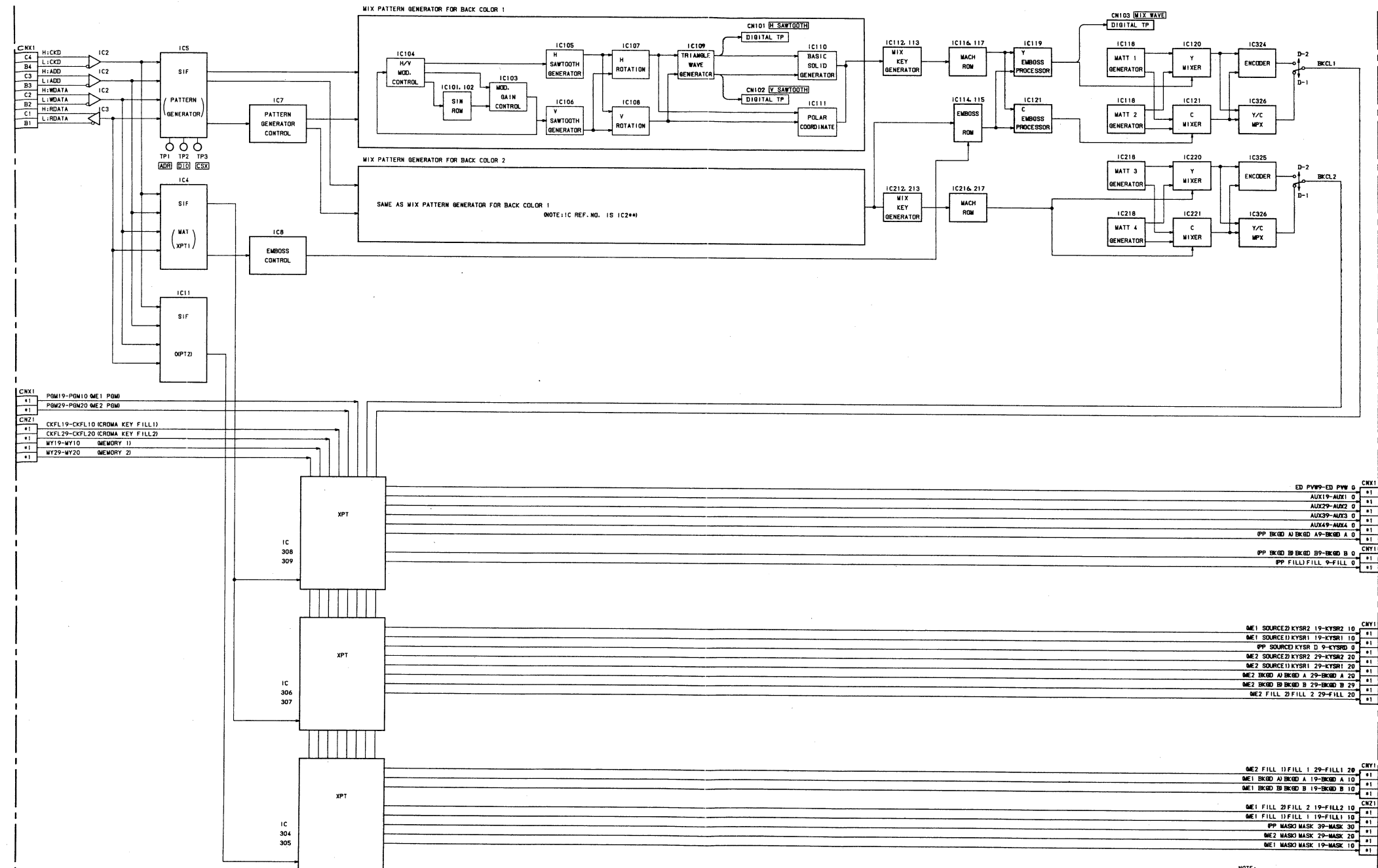
OUTPUT PROCESSOR BOARD



OUT-2
DVS-8000C

MAT-1 MAT-1
MAT-2 MAT-2

MATTE GENERATOR BOARD



MAT-1
DVS-8000
MAT-2
DVS-8000C

XPT-2 XPT-2



SECTION 8

SEMICONDUCTOR ELECTRODES

ここに記載されているIC、トランジスタ、ダイオードは、それぞれの機能を等価的に表わしたものです。したがって互換性を表わすものではありません。(互換性のない型名が併記されている事もあります。) 部品の交換をする時は、SPARE PARTSの章を参照して下さい。

ICs, transistors and diodes whoses functions are equivalent are described here. Therefore, incompatible device names may be described together. For parts replacement, refer to the Spare Parts section in this manual.

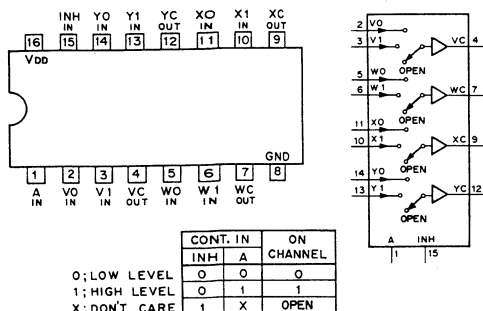
IC	PAGE	IC	PAGE	IC	PAGE	IC	PAGE
74ACT257SJ.....	8-2	LM1881M.....	8-33	SN74HC251NS.....	8-45	TC7S32F.....	8-48
74F02SJ.....	8-2	LM360M.....	8-33	SN74HC393ANS.....	8-45	TL082CPS.....	8-48
74F38SJ.....	8-2	LT1009CZ.....	8-33	SN74HC540ANS.....	8-45	TL431CLP.....	8-48
74F86SJ.....	8-2	LT1171CT.....	8-34	SN74HC564NS.....	8-45	UPD27C2001D.....	8-49
CAT35C104HP.....	8-2	MAX232CPE.....	8-34	SN74HC574ANS.....	8-45	UPD28C64C-20.....	8-49
CX20194.....	8-2	MAX452CSA.....	8-34	SN74HC74ANS.....	8-46	UPC4558G2.....	8-48
CX20201A-1.....	8-3	MAX691CPE.....	8-34	SN74HC86ANS.....	8-46	WS27C010L-12D.....	8-50
CX22029.....	8-3	MB766P.....	8-34	SN74HCT574ANS.....	8-45	WS57C291B-35T.....	8-50
CX23043.....	8-3	MB81C78A-35P.....	8-35	SN75ALS194N.....	8-46	WS57C45-35T.....	8-50
CX23065A.....	8-3	MB8421-90LPFQ.....	8-35	SN75ALS195J.....	8-46	WS57C49B-35T.....	8-51
CXA1389AQ.....	8-4	MB88341PF.....	8-35	TC4S66F.....	8-46		
CXD1095Q.....	8-4	MB89394-PF.....	8-36	TC74AC00F.....	8-43	TRANSISTOR	PAGE
CXD1319AQ.....	8-5	MC10125L.....	8-37	TC74AC02F.....	8-43	2SA1226.....	8-52
CXD8026Q.....	8-6	MC10H124M.....	8-37	TC74AC04F.....	8-43	2SA812.....	8-52
CXD8052Q.....	8-7	MC10H125M.....	8-37	TC74AC08F.....	8-43	2SB810.....	8-52
CXD8053Q.....	8-9	MC14495P1.....	8-37	TC74AC138F.....	8-43	2SC2757.....	8-52
CXD8054S.....	8-10	MC34051P.....	8-37	TC74AC139F.....	8-44	2SC3053.....	8-52
CXD8055Q.....	8-11	MC68020RC25.....	8-38	TC74AC157F.....	8-44		
CXD8056Q.....	8-12	MC68881RC25.....	8-39	TC74AC163F.....	8-44	2SC3356.....	8-52
CXD8058Q.....	8-13	MC74HC589F.....	8-40	TC74AC164F.....	8-44		
CXD8059Q.....	8-14	MC74HC595AF.....	8-40	TC74AC174F.....	8-46	DIODE	PAGE
CXD8060Q.....	8-15	MSM514221A-4RS.....	8-40	TC74AC175F.....	8-46	1SS123.....	8-52
CXD8061Q.....	8-16	PALCE16V8H-15PC.....	8-41	TC74AC240F.....	8-47	1SS226.....	8-52
CXD8062Q.....	8-17	PALCE20V8H-15PC.....	8-41	TC74AC245F.....	8-47	ERB81-004.....	8-52
CXD8063Q.....	8-18	RTC-62421B.....	8-41	TC74AC245P.....	8-47	GL-6R202.....	8-52
CXD8065Q.....	8-19	SBX1601A.....	8-42	TC74AC257F.....	8-2	LN25RP.....	8-52
CXD8066G.....	8-20	SBX1602A.....	8-42	TC74AC32F.....	8-47		
CXD8067G.....	8-21	SM6103S.....	8-42	TC74AC540F.....	8-45	LN35BP.....	8-52
CXD8189AQ.....	8-23	SN74HC00ANS.....	8-43	TC74AC541F.....	8-47	S3S4M.....	8-52
CXD8190Q.....	8-24	SN74HC02ANS.....	8-43	TC74AC564F.....	8-45	TLG123A.....	8-52
CXD8199Q.....	8-27	SN74HC04ANS.....	8-43	TC74AC574F.....	8-45		
CXD8258Q.....	8-6	SN74HC08ANS.....	8-43	TC74AC74F.....	8-46		
CXD8300Q.....	8-6	SN74HC109NS.....	8-43	TC74AC86F.....	8-46		
CXK581001M-70L.....	8-28	SN74HC133NS.....	8-43	TC74ACT04F.....	8-43		
DS1000M-50.....	8-28	SN74HC138ANS.....	8-43	TC74ACT574F.....	8-45		
HD647180X.....	8-29	SN74HC139ANS.....	8-44	TC74ACT74F.....	8-46		
HD647180XOCP6.....	8-31	SN74HC153ANS.....	8-44	TC74HC123AF.....	8-47		
HM63021FP-28.....	8-33	SN74HC157ANS.....	8-44	TC74HC221AF.....	8-47		
HM63021P-28.....	8-33	SN74HC163ANS.....	8-44	TC74HC4051AF.....	8-48		
ICL7621BCSA.....	8-33	SN74HC164NS.....	8-44	TC74HC4053AF.....	8-48		

等価回路はICメーカーのData Bookに従いました。

The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

IC

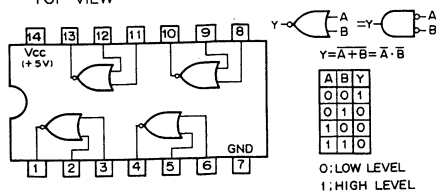
74ACT257SJ (NS) FLAT PACKAGE
TC74AC257F (TOSHIBA) FLAT PACKAGE
C-MOS 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
- TOP VIEW -



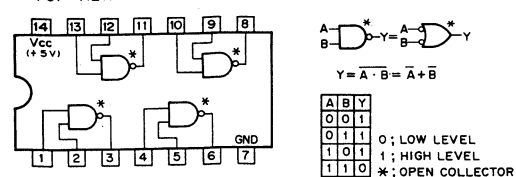
NOTE:

TYPE	V _{DD}
74AC74HC	+2 to +6V
74ACT	+5V
TC74AC257F	+2 to +5.5V

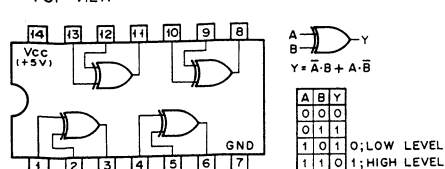
74F02SJ (NS) FLAT PACKAGE
TTL 2-INPUT POSITIVE-NOR GATE
- TOP VIEW -



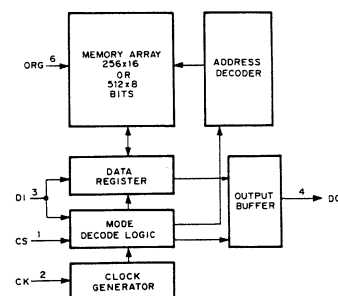
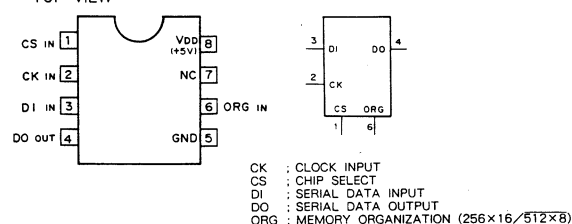
74F38SJ (NS) FLAT PACKAGE
TTL 2-INPUT POSITIVE-NAND GATE BUFFER
WITH OPEN-COLLECTOR
- TOP VIEW -



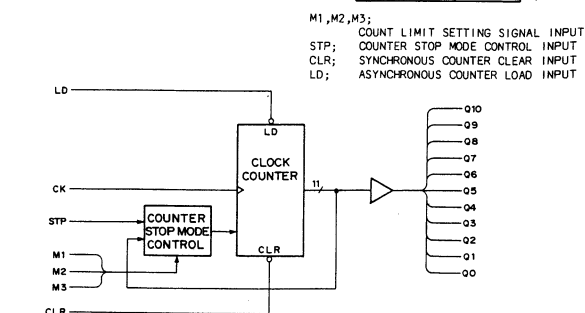
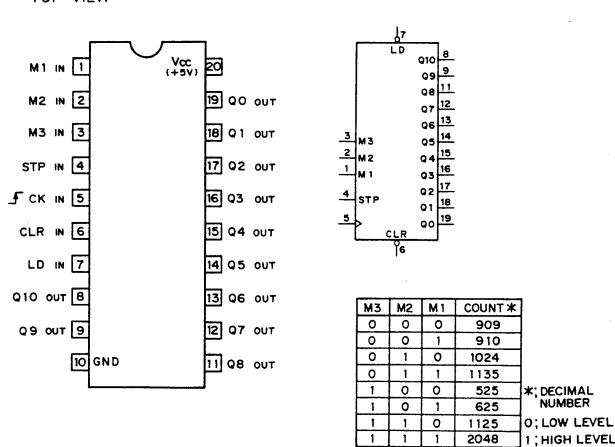
74F86SJ (NS) FLAT PACKAGE
TTL EXCLUSIVE OR GATE
- TOP VIEW -



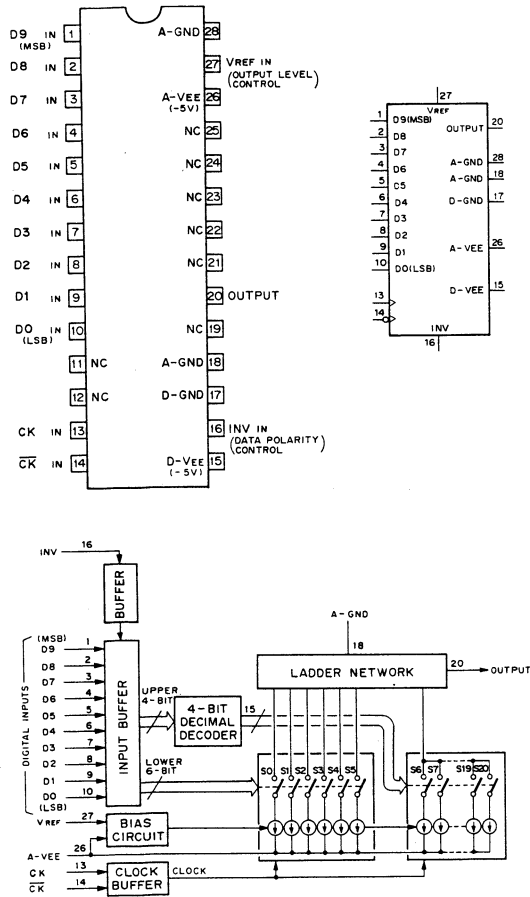
CAT35C104HP (CATALYST SEMICONDUCTOR)
C-MOS 4K-BIT SERIAL EEPROM
- TOP VIEW -



CX20194 (SONY)
BIPOLAR 11-BIT SYNCHRONOUS BINARY COUNTER
- TOP VIEW -



CX20201A-1 (SONY) FLAT PACKAGE
ECL 10-BIT D/A CONVERTER
- TOP VIEW -

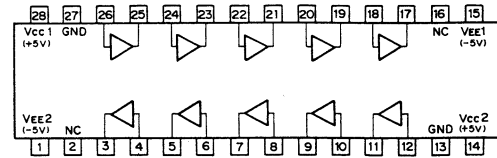


INV SELECTION

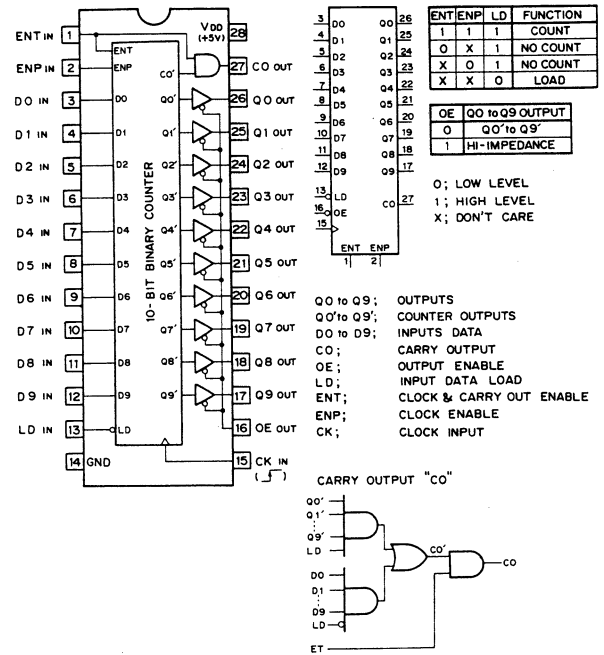
DATA INPUTS										OUTPUT	
D9	D8	D7	D6	D5	D4	D3	D2	D1	D0	INV "0"	INV "1"
1	1	1	1	1	1	1	1	1	1	$V_o(OS)$	$V_o(OS) - 1.000V$
1	1	1	1	1	1	1	1	1	0	$V_o(OS) - 0.001V$	$V_o(OS) - 0.999V$
1	1	1	1	1	1	1	1	0	1	$V_o(OS) - 0.002V$	$V_o(OS) - 0.998V$
1	1	1	1	1	1	1	0	1	0	$V_o(OS) - 0.500V$	$V_o(OS) - 0.502V$
1	1	1	1	1	1	0	1	1	1	$V_o(OS) - 0.501V$	$V_o(OS) - 0.501V$
1	1	1	1	1	0	1	1	1	0	$V_o(OS) - 0.502V$	$V_o(OS) - 0.500V$
1	1	1	1	0	1	1	1	1	1	$V_o(OS) - 1.000V$	$V_o(OS)$
1	1	1	0	1	1	1	1	1	1		
1	1	0	1	1	1	1	1	1	1		
1	0	1	1	1	1	1	1	1	1		
1	0	1	1	1	1	1	1	0	1		
1	0	1	1	1	1	1	0	1	0		
1	0	1	1	1	1	0	1	1	1		
1	0	1	1	1	0	1	1	1	1		
1	0	1	1	0	1	1	1	1	1		
1	0	1	0	1	1	1	1	1	1		
1	0	1	0	1	1	1	1	0	1		
1	0	1	0	1	1	1	0	1	1		
1	0	1	0	1	1	0	1	1	1		
1	0	1	0	1	0	1	1	1	1		
1	0	1	0	1	0	1	1	0	1		
1	0	1	0	1	0	1	0	1	1		
1	0	1	0	1	0	1	0	1	0		
1	0	1	0	1	0	1	0	0	1		
1	0	1	0	1	0	0	1	1	1		
1	0	1	0	1	0	0	1	0	1		
1	0	1	0	1	0	0	1	0	0		
1	0	1	0	1	0	0	0	1	1		
1	0	1	0	1	0	0	0	1	0		
1	0	1	0	1	0	0	0	0	1		
1	0	1	0	1	0	0	0	0	0		
1	0	1	0	0	1	1	1	1	1		
1	0	1	0	0	1	1	1	1	0		
1	0	1	0	0	1	1	1	0	1		
1	0	1	0	0	1	1	1	0	0		
1	0	1	0	0	1	1	0	1	1		
1	0	1	0	0	1	1	0	1	0		
1	0	1	0	0	1	1	0	0	1		
1	0	1	0	0	1	1	0	0	0		
1	0	1	0	0	1	0	1	1	1		
1	0	1	0	0	1	0	1	1	0		
1	0	1	0	0	1	0	1	0	1		
1	0	1	0	0	1	0	1	0	0		
1	0	1	0	0	1	0	0	1	1		
1	0	1	0	0	1	0	0	1	0		
1	0	1	0	0	1	0	0	0	1		
1	0	1	0	0	1	0	0	0	0		
1	0	1	0	0	0	1	1	1	1		
1	0	1	0	0	0	1	1	1	0		
1	0	1	0	0	0	1	1	0	1		
1	0	1	0	0	0	1	1	0	0		
1	0	1	0	0	0	1	0	1	1		
1	0	1	0	0	0	1	0	1	0		
1	0	1	0	0	0	1	0	0	1		
1	0	1	0	0	0	1	0	0	0		
1	0	1	0	0	0	0	1	1	1		
1	0	1	0	0	0	0	1	1	0		
1	0	1	0	0	0	0	1	0	1		
1	0	1	0	0	0	0	1	0	0		
1	0	1	0	0	0	0	0	1	1		
1	0	1	0	0	0	0	0	1	0		
1	0	1	0	0	0	0	0	0	1		
1	0	1	0	0	0	0	0	0	0		

1; ECL HIGH LEVEL (= -0.89V)
0; ECL LOW LEVEL (= -1.75V)
 $V_o(OS)$; ZERO OFFSET

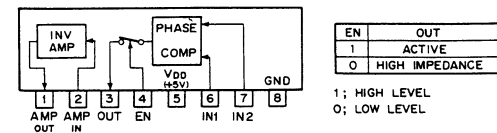
CX22029 (SONY)
TTL-TO-ECL TRANSLATOR
- TOP VIEW -



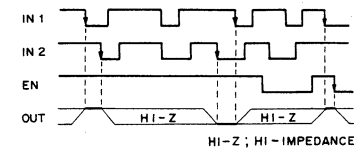
CX23043 (SONY)
N-MOS SYNCHRONOUS 10-BIT BINARY COUNTER
- TOP VIEW -



CX23065A (SONY)
N-MOS PHASE COMPARATOR WITH INVERSION AMPLIFIER
- PRINTED SIDE VIEW -

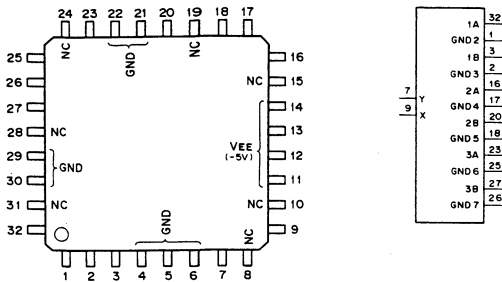


TIMING CHART



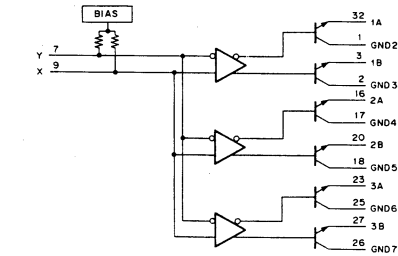
CXA1389AQ (SONY)

CABLE DRIVER
- TOP VIEW -

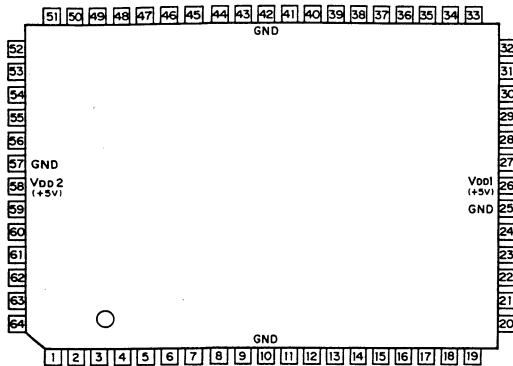


(V_{EE} = -5V)

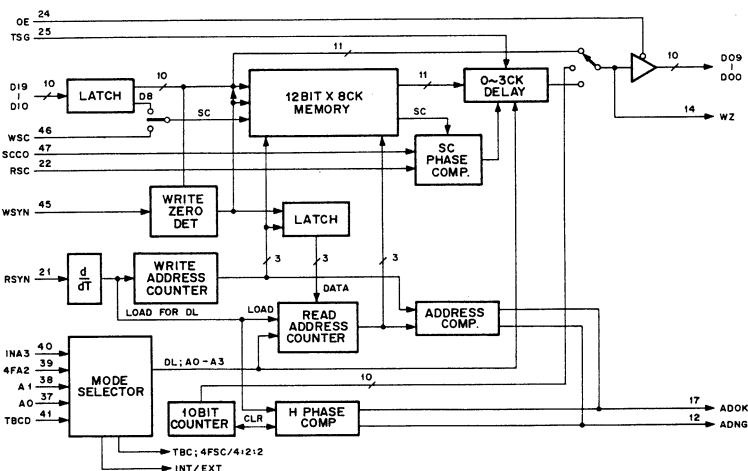
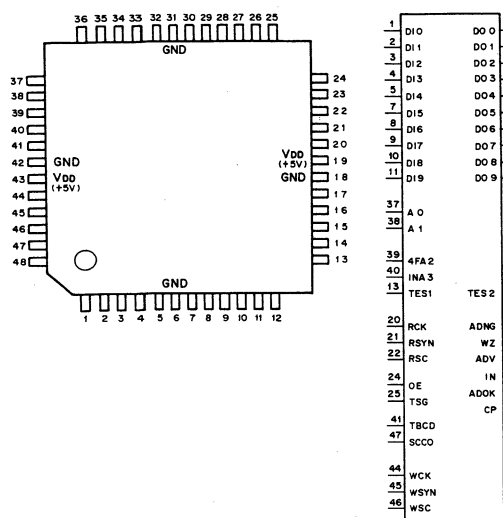
PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	-	GND2	9	I	X	17	-	GND4	25	-	GND6
2	-	GND3	10	-	NC	18	-	GND5	26	-	GND7
3	O	1B	11	-	VEE	19	-	NC	27	O	3B
4	-	GND	12	-	VEE	20	O	2B	28	-	NC
5	-	GND	13	-	VEE	21	-	GND	29	-	GND
6	-	GND	14	-	VEE	22	-	GND	30	-	GND
7	I	Y	15	-	NC	23	O	3A	31	-	NC
8	-	NC	16	O	2A	24	-	NC	32	O	1A



CXD1095Q (SONY) FLAT PACKAGE C-MOS I/O PORT EXPANDER - TOP VIEW -



CXD1319AQ (SONY)
C-MOS VIDEO BUFFER MEMORY
- TOP VIEW -



PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL	PIN NO.	IN	OUT	SYMBOL
1	O		DI0	13	O		TES1	25	O		TSG	37	O		A0
2	O		DI1	14	O		WZ	26	O		DO9	38	O		A1
3	O		DI2	15	O		ADV	27	O		DO8	39	O		4FA2
4	O		DI3	16	O		IN	28	O		DO7	40	O		INA3
5	O		DI4	17	O		ADOK	29	O		DO6	41	O		TBCD
6			GND	18			GND	30	O		DO5	42			GND
7	O		DI5	19			VDD(+5V)	31			GND	43			VDD(+5V)
8	O		DI6	20	O		RCK	32	O		DO4	44	O		WCK
9	O		DI7	21	O		RSYN	33	O		DO3	45	O		WSYN
10	O		DI8	22	O		RSC	34	O		DO2	46	O		WSC
11	O		DI9	23	O		CP	35	O		DO1	47	O		SCCO
12	O		ADNG	24	O		OE	36	O		DO0	48	O		TES2

INPUT

DI0-DI9; DATA INPUT

TES; TEST

RCK; READ CLOCK INPUT (REFERENCE)

RSYN; READ SYNC INPUT (REFERENCE)

RSC; READ SUB CARRIER INPUT (REFERENCE)

OE; ENABLE OUTPUT (L; OUTPUT/H; HIGH IMPEDANCE)

TSG; TSG MODE APPOINT (L; TSG/H; TBC OR DL MODE)

A0; DL MODE OF DELAY TIME APPOINT

A1; DL MODE: DELAY TIME APPOINT/TBC MODE: 2FH GATE ON, OFF

APPOINT (H; ON/L; OFF)

4FA2; DL MODE: DELAY TIME APPOINT/TBC MODE: INPUT PULSE

FORMAT APPOINT (H; 4Fsc/L; 4:2:2)

INA3; DL MODE: DELAY TIME APPOINT/TBC MODE: H SYNC DETECT

(H; INT/L; EXT)

TBCD; TBC/DL MODE SELECT (H; TBC/L; DL) (TSG LOW; TSG MODE)

WCK; WRITE CLOCK INPUT

WSYN; EXT MODE OF WRITE H SYNC INPUT (INT MODE; NC)

WSC; EXT MODE OF SUB CARRIER INPUT

SCCO; 4Fsc MODE SC OF PHASE ADJUST ONLY; L

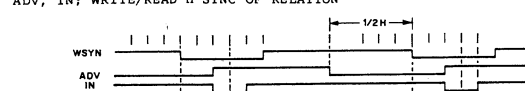
OUTPUT

DO0-DO9; DATA OUTPUT

ADNG; TBC UNSTABILIZED; L (READ WRITE 7+1CLOCK)

WZ; VIDEO DATA OUTPUT OF ABSOLUTE PHASE

ADV, IN; WRITE/READ H SYNC OF RELATION



ADOK; TBC STABILIZED; L (READ WRITE 3+1 CLOCK)
CP;

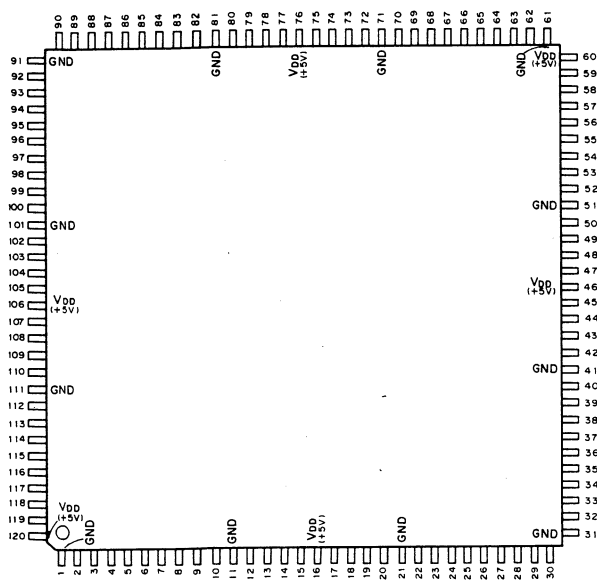
TBCD	4FA2	SCCO	INA3	CP	OUTPUT
0	X	0	X	INT13 SYNC	EXT SYNC
0	X	1	X	INT14 SYNC	EXT SYNC
1	0	X	1	INT13 SYNC	EXT SYNC
1	1	X	1	INT14 SYNC	EXT SYNC
1	X	X	0		EXT SYNC

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

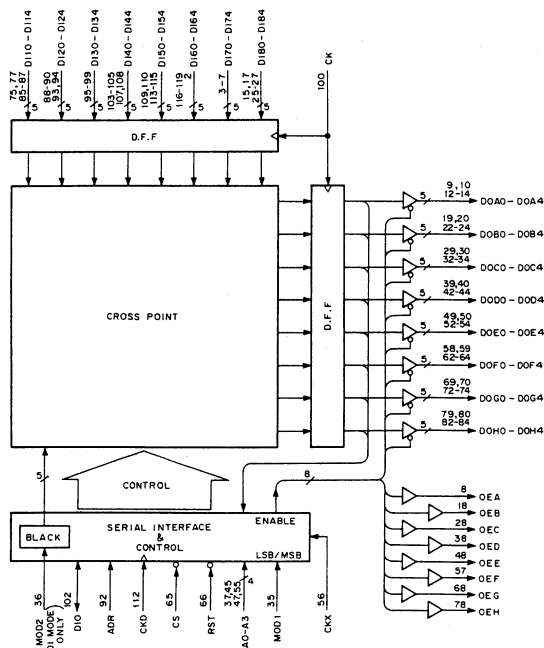
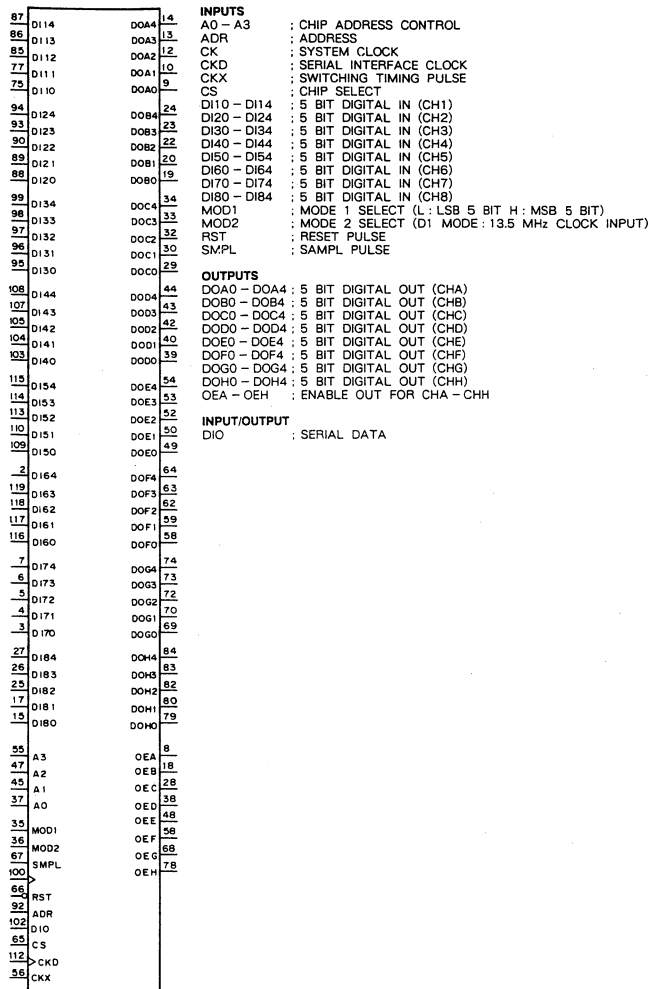
INT13 SYNC; D2-D9 DETECTED 13.5M FORMAT SYNC
INT14 SYNC; D2-D9 DETECTED 14.3M FORMAT SYNC
EXT SYNC; INPUT SYNC FROM WSYN (45PIN)

CXD8026Q (SONY) FLAT PACKAGE (STANDARD TYPE)
 CXD8258Q (SONY) FLAT PACKAGE (HIGH SPEED TTL I/F TYPE)
 CXD8300Q (SONY) FLAT PACKAGE (HIGH SPEED C-MOS TYPE)

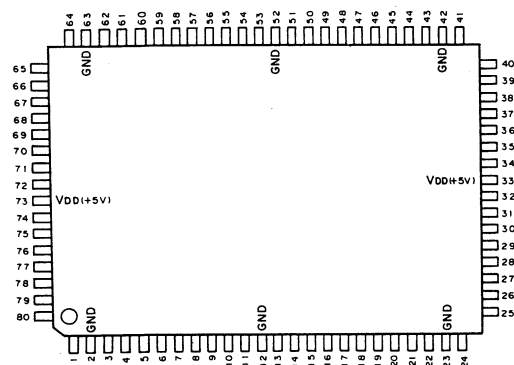
C-MOS 8x8 CHANNEL DIGITAL PARALLEL MATRIX SWITCHER (5BIT)
 - TOP VIEW -



(V _{DD} = +5V)											
PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL
1	–	GND	31	–	GND	61	–	GND	91	–	GND
2	I	DI64	32	O	DOC2	62	O	DOF2	92	I	ADR
3	I	DI70	33	O	DOC3	63	O	DOF3	93	I	DI23
4	I	DI71	34	O	DOC4	64	O	DOF4	94	I	DI24
5	I	DI72	35	I	MOD1	65	I	CS	95	I	DI30
6	I	DI73	36	I	MOD2	66	I	RST	96	I	DI31
7	I	DI74	37	I	A0	67	I	SMPL	97	I	DI32
8	O	OEA	38	O	OED	68	O	OEG	98	I	DI33
9	O	DOA0	39	O	DOD0	69	O	DOG0	99	I	DI34
10	O	DOA1	40	O	DOD1	70	O	DOG1	100	I	CK
11	–	GND	41	–	GND	71	–	GND	101	–	GND
12	O	DOA2	42	O	DOD2	72	O	DOG2	102	I/O	DIO
13	O	DOA3	43	O	DOD3	73	O	DOG3	103	I	DI40
14	O	DOA4	44	O	DOD4	74	O	DOG4	104	I	DI41
15	I	DI80	45	I	A1	75	I	DI10	105	I	DI42
16	–	V _{DD}	46	–	V _{DD}	76	–	V _{DD}	106	–	V _{DD}
17	I	DI81	47	I	A2	77	I	DI11	107	I	DI43
18	O	OEB	48	O	OEE	78	O	OEH	108	I	DI44
19	O	DOB0	49	O	DOE0	79	O	DOH0	109	I	DI50
20	O	DOB1	50	O	DOE1	80	O	DOH1	110	I	DI51
21	–	GND	51	–	GND	81	–	GND	111	–	GND
22	O	DOB2	52	O	DOE2	82	O	DOH2	112	I	CKD
23	O	DOB3	53	O	DOE3	83	O	DOH3	113	I	DI52
24	O	DOB4	54	O	DOE4	84	O	DOH4	114	I	DI53
25	I	DI82	55	I	A3	85	I	DI12	115	I	DI54
26	I	DI83	56	I	CKX	86	I	DI13	116	I	DI60
27	I	DI84	57	O	OEF	87	I	DI14	117	I	DI61
28	O	OEC	58	O	DOF0	88	I	DI20	118	I	DI62
29	O	DOC0	59	O	DOF1	89	I	DI21	119	I	DI63
30	O	DOC1	60	–	V _{DD}	90	I	DI22	120	–	V _{DD}



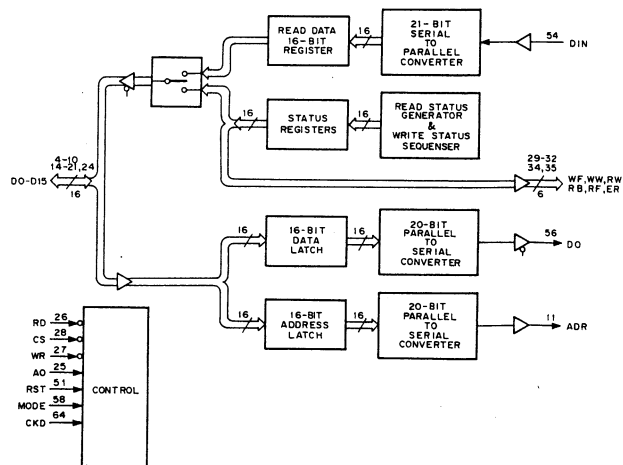
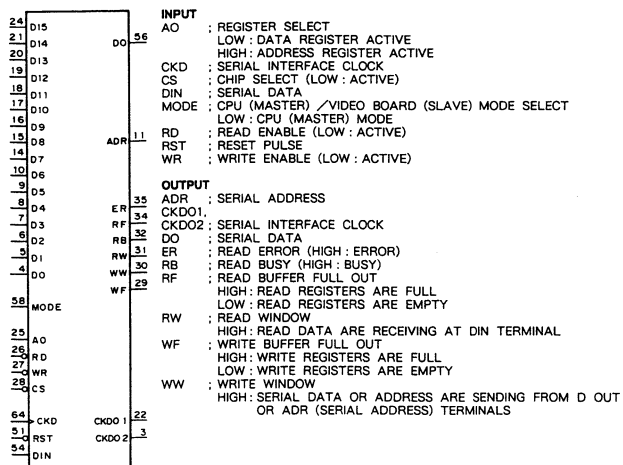
CXD8052Q (SONY) FLAT PACKAGE
C-MOS SERIAL CONTROLLER
- TOP VIEW -



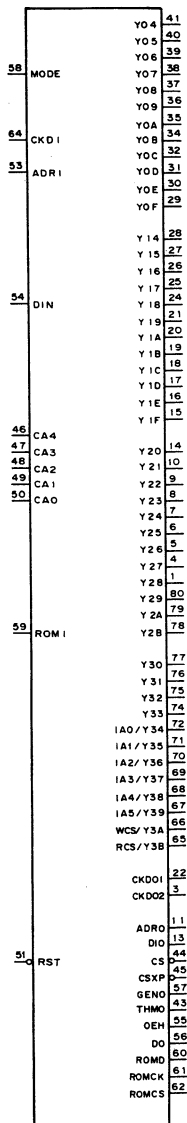
(CPU (MASTER) MODE)

(V_{DD} = +5V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	-	NC	21	I/O	D14	41	-	NC	61	-	NC
2	-	GND	22	O	CKD01	42	-	GND	62	-	NC
3	O	CKD02	23	-	GND	43	-	NC	63	-	GND
4	I/O	D0	24	I/O	D15	44	-	NC	64	I	CKD
5	I/O	D1	25	I/O	A0	45	-	NC	65	-	NC
6	I/O	D2	26	I/O	RD	46	-	NC	66	-	NC
7	I/O	D3	27	I/O	WR	47	-	NC	67	-	NC
8	I/O	D4	28	I/O	CS	48	-	NC	68	-	NC
9	I/O	D5	29	O	WF	49	-	NC	69	-	NC
10	I/O	D6	30	O	WW	50	-	NC	70	-	NC
11	O	ADR	31	O	RW	51	I	RST	71	-	NC
12	-	GND	32	O	RB	52	-	GND	72	-	NC
13	-	NC	33	-	V _{DD}	53	-	NC	73	-	V _{DD}
14	I/O	D7	34	O	RF	54	I	DIN	74	-	NC
15	I/O	D8	35	O	ER	55	-	NC	75	-	NC
16	I/O	D9	36	-	NC	56	O	DO	76	-	NC
17	I/O	D10	37	-	NC	57	-	NC	77	-	NC
18	I/O	D11	38	-	NC	58	I	MODE	78	-	NC
19	I/O	D12	39	-	NC	59	-	NC	79	-	NC
20	I/O	D13	40	-	NC	60	-	NC	80	-	NC



(VIDEO BOARD (SLAVE) MODE)

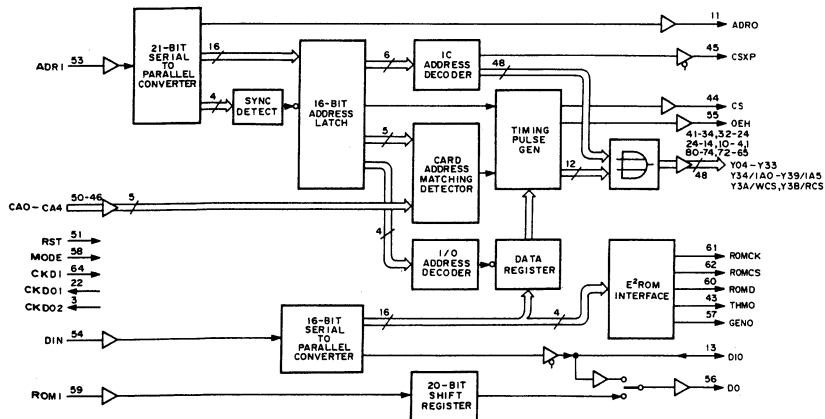


PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL
1	O	Y28	21	I/O	Y19	41	O	Y04	61	O	ROMCK
2	-	GND	22	O	CKD01	42	-	GND	62	O	ROMCS
3	O	CKD02	23	-	GND	43	O	THMO	63	-	GND
4	I/O	Y27	24	I/O	Y18	44	O	CS	64	I	CKDI
5	I/O	Y26	25	I/O	Y17	45	O	CSXP	65	O	Y3B/RCS
6	I/O	Y25	26	I/O	Y16	46	I	CA4	66	O	Y3A/WCS
7	I/O	Y24	27	I/O	Y15	47	I	CA3	67	O	Y39/IA5
8	I/O	Y23	28	I/O	Y14	48	I	CA2	68	O	Y38/IA4
9	I/O	Y22	29	O	Y0F	49	I	CA1	69	O	Y37/IA3
10	I/O	Y21	30	O	Y0E	50	I	CA0	70	O	Y36/IA2
11	O	ADRO	31	O	Y0D	51	I	RST	71	O	Y35/IA1
12	-	GND	32	O	Y0C	52	-	GND	72	O	Y34/IA0
13	I/O	DIO	33	-	VDD	53	I	ADRI	73	-	VDD
14	I/O	Y20	34	O	Y0B	54	I	DIN	74	O	Y33
15	I/O	Y1F	35	O	Y0A	55	O	OEI	75	O	Y32
16	I/O	Y1E	36	O	Y09	56	O	DO	76	O	Y31
17	I/O	Y1D	37	O	Y08	57	O	GENO	77	O	Y30
18	I/O	Y1C	38	O	Y07	58	I	MODE	78	O	Y28
19	I/O	Y1B	39	O	Y06	59	I	ROMI	79	O	Y2A
20	I/O	Y1A	40	O	Y05	60	O	ROMD	80	O	Y29

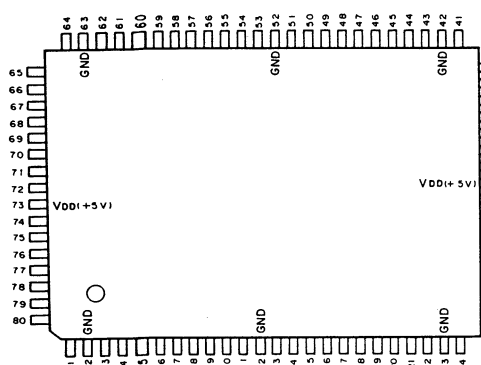
INPUT
 ADRI : SERIAL ADDRESS
 CA0 - CA4 : CARD ADDRESS (5 BIT)
 CKDI : SERIAL INTERFACE CLOCK
 DIN : SERIAL DATA
 MODE : CPU (MASTER) / VIDEO BOARD (SLAVE) MODE SELECT
 H : VIDEO (SLAVE) MODE
 ROMI : READ DATA IN FOR EPROM
 RST : RESET PULSE (L : RESET)

OUTPUT
 ADRO : SERIAL ADDRESS
 CKD01, CKD02 : SERIAL INTERFACE CLOCK
 CSXP : CHIP SELECT OUT FOR 20 BIT CROSS POINT ICS
 DO : SERIAL DATA
 GENO : UNIVERSAL CONTROL
 OEI : ENABLE OUT FOR DRIVER
 ROM CK : CLOCK OUT FOR EPROM
 ROM CS : CHIP SELECT OUT FOR EPROM
 ROMD : WRITE DATA OUT FOR EPROM
 THMO : THERMISTOR CONTROL
 Y04 - Y3B : IC ADDRESS DECODER

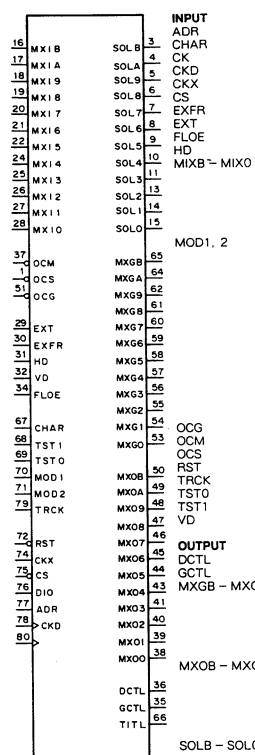
INPUT/OUTPUT
 DIO : SERIAL DATA



CXD8053Q (SONY) FLAT PACKAGE
CMOS BOX GENERATOR
- TOP VIEW -



PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	OCS	21	I	MXI6	41	O	MXO3	61	O	MXG8
2	-	GND	22	I	MXI5	42	-	GND	62	O	MXG9
3	O	SOLB	23	-	GND	43	O	MXO4	63	-	GND
4	O	SOLA	24	I	MXI4	44	O	MXO5	64	O	MXGA
5	O	SOL9	25	I	MXI3	45	O	MXO6	65	O	MXGB
6	O	SOL8	26	I	MXI2	46	O	MXO7	66	O	TITL
7	O	SOL7	27	I	MXI1	47	O	MXO8	67	I	CHAR
8	O	SOL6	28	I	MXI0	48	O	MXO9	68	I	TST1
9	O	SOL5	29	I	EXT	49	O	MXO0	69	I	TST0
10	O	SOL4	30	I	EXFR	50	O	MXO8	70	I	MOD1
11	O	SOL3	31	I	HD	51	I	OCG	71	I	MOD0
12	-	GND	32	I	VD	52	-	GND	72	I	RST
13	O	SOL2	33	-	VDD	53	O	MXG0	73	-	VDD
14	O	SOL1	34	I	FLOE	54	O	MXG1	74	I	CKX
15	O	SOLO	35	O	GCTL	55	O	MXG2	75	I	CS
16	I	MXIB	36	O	DCTL	56	O	MXG3	76	I/O	DIO
17	I	MXIA	37	I	OCM	57	O	MXG4	77	I	ADR
18	I	MXI9	38	O	MXO0	58	O	MXG5	78	I	CKD
19	I	MXI8	39	O	MXO1	59	O	MXG6	79	I	TRCK
20	I	MXI7	40	O	MXO2	60	O	MXG7	80	I	CK



INPUT
ADR : SERIAL ADDRESS
CHAR : CHARACTER
CK : SYSTEM CLOCK (MAX. 20MHz)
CKD : SERIAL INTERFACE CLOCK
CKX : SWITCHING TIMING PULSE (HIGH ACTIVE)
CS : CHIP SELECT
EXFR : EXTERNAL FRINGE PULSE
EXT : EXTERNAL FRINGE MODE
FLOE : FIELD ODD/EVEN
HD : HORIZONTAL DRIVE PULSE

MODE 0	NOT USED
MODE 1	VIDEO DATA
MODE 2	FRINGE DATA
MODE 3	MULTIPLEXED SINE DATA

MOD1, 2

MODE SET

MOD1	MOD0	MODE	FUNCTION
0	0	MODE 0	BOX MASK SOLID GENERATOR
0	1	MODE 1	SAFE TITLE GENERATOR / INSERTER
1	0	MODE 2	WIPE FRINGE MODULATION OSCILLATOR
1	1	MODE 3	WIPE H-V MODULATION OSCILLATOR

0 : LOW LEVEL, 1 : HIGH LEVEL

OCG : OUTPUT ENABLE OF MXGB - MXG0 (LOW : ENABLE)
OCM : OUTPUT ENABLE OF MXO0 - MXO0 (LOW : ENABLE)
OCS : OUTPUT ENABLE OF SOLB - SOLO (LOW : ENABLE)
RST : SERIAL CONTROL RESET
TRCK : FRINGE DATA READ PULSE
TST0 : OUTPUT SWITCH
TST1 : TEST / NORMAL
VD : VERTICAL DRIVE PULSE

OUTPUT

DCTL : MXO OUT CONTROL PULSE
GCTL : MXG OUT CONTROL PULSE

MXGB - MXG0

MODE 0	COUNTER OUTPUT
MODE 1	COUNTER OUTPUT
MODE 2	FRINGE MOD. GAIN
MODE 3	H-V MOD. MULTIPLEXED GAIN

MXO0 - MXO0

MODE 0	SOLID DATA
MODE 1	SOLID DATA
MODE 2	FRINGE MOD. ADDRESS
MODE 3	H-V MOD. MULTIPLEXED ADDRESS

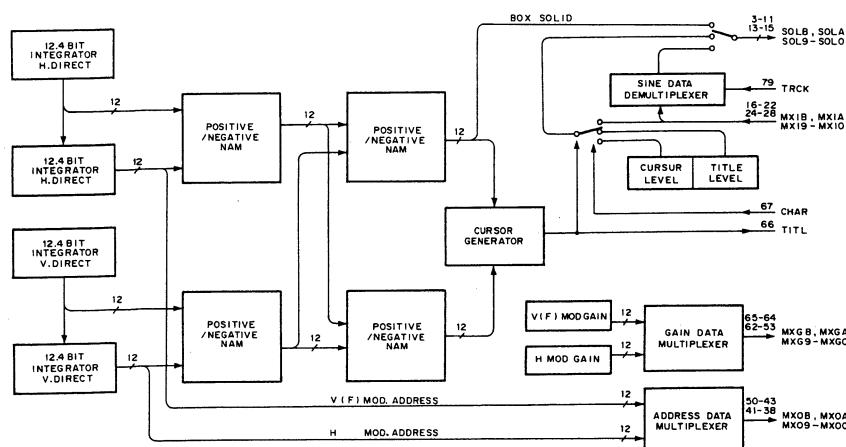
SOLB - SOLO

MODE 0	SOLID DATA
MODE 1	SAFETITLE DATA
MODE 2	FRINGE DATA
MODE 3	H MOD. DATA

TITL : SAFE TITLE

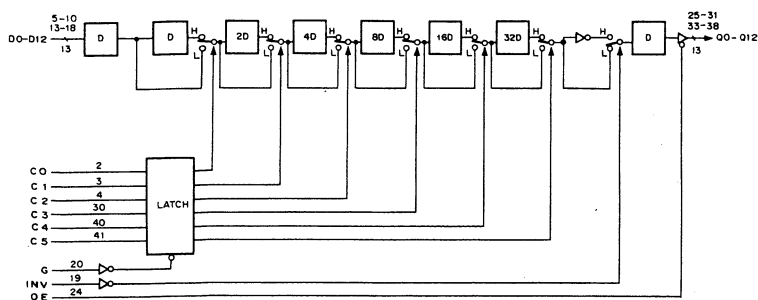
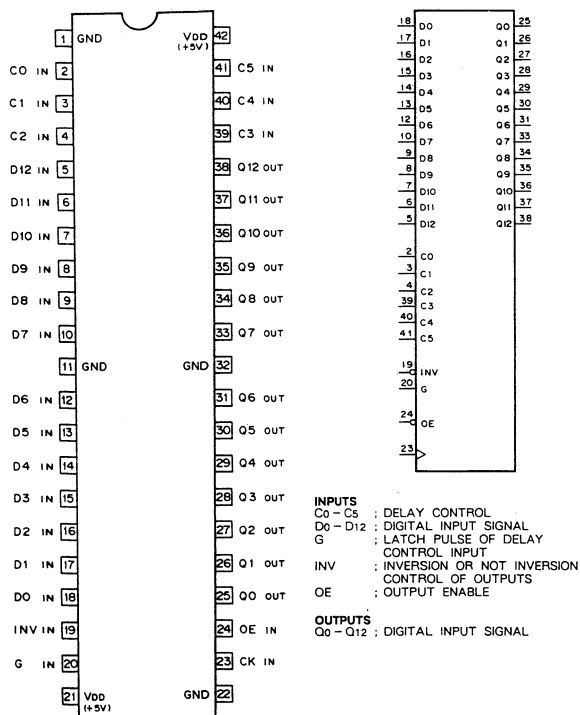
INPUT/OUTPUT

DIO : SERIAL DATA



CXD8054S (SONY)

C-MOS 13-BIT VARIABLE DELAY LINE
- TOP VIEW -

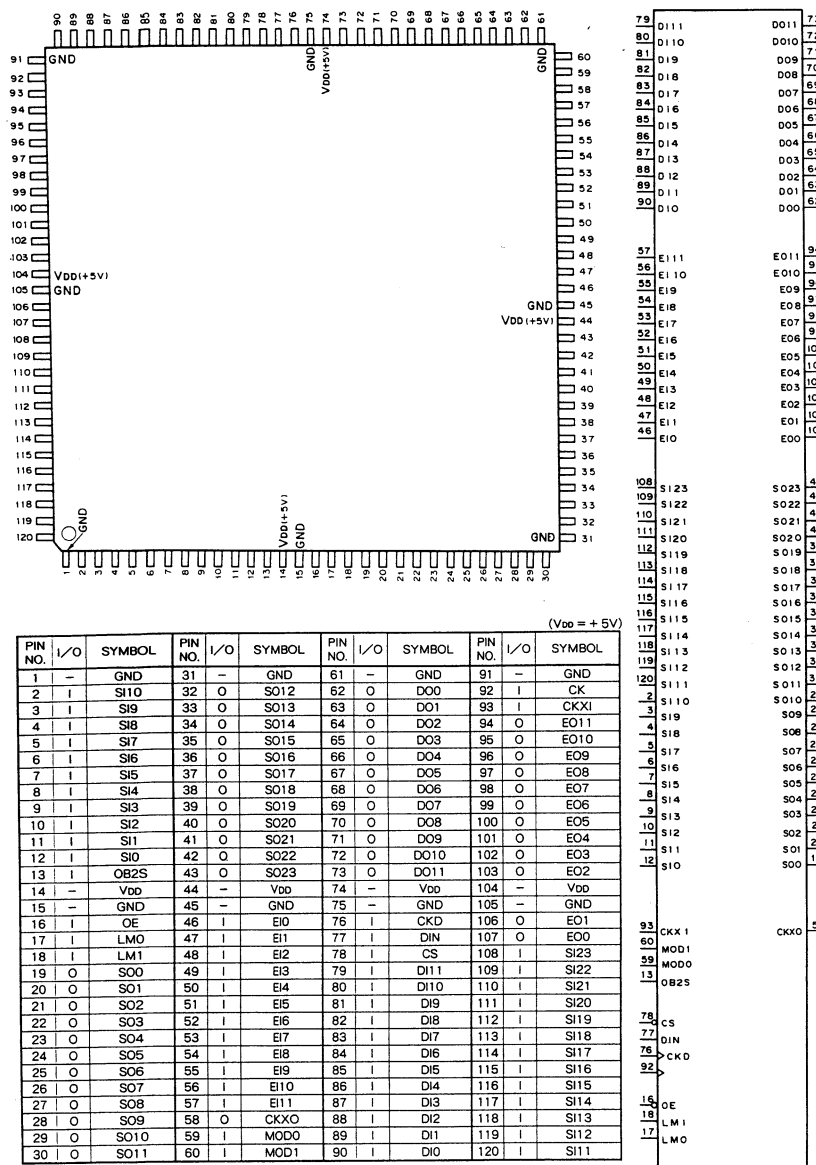


DELAY CONTROL

C5	C4	C3	C2	C1	C0	DELAY (CLOCK)
0	0	0	0	0	0	2
0	0	0	0	0	1	3
0	0	0	0	1	0	4
0	0	0	0	1	1	5
...
1	1	1	1	0	0	62
1	1	1	1	0	1	63
1	1	1	1	1	0	64
1	1	1	1	1	1	65

0 : LOW LEVEL
1 : HIGH LEVEL

CXD8055Q (SONY) FLAT PACKAGE
C-MOS DIGITAL FILTER
- TOP VIEW -



INPUT
CK : SYSTEM CLOCK
CKD : SERIAL INTERFACE CLOCK
CKXI : SWITCHING TIMING PULSE
CS : CHIP SELECT (LOW : ENABLE)
DIO - DI11 : 12 BIT DIGITAL IN
DIN : SERIAL COEFFICIENT DATA IN (C₀ - C₃)
EIO - EI11 : 12 BIT EXPANSION SHIFT REGISTER IN
LM0, LM1 : PROGRAMABLE LIMITER SELECT 0, 1

LM1	LM0	SO OUTPUT
0	0	21 BIT
0	1	22 BIT
1	0	23 BIT
1	1	24 BIT

0: LOW LEVEL
1: HIGH LEVEL

MOD0, MOD1 : MODE SELECT 0, 1

MOD1	MOD0	FUNCTION MODE
1	1	SYMMETRICAL 7 TAP DIGITAL FILTER
0	1	ASYMMETRICAL 4 TAP DIGITAL FILTER
1	0	SYMMETRICAL 13 TAP DIGITAL FILTER
0	0	ASYMMETRICAL 7 TAP DIGITAL FILTER

0: LOW LEVEL
1: HIGH LEVEL

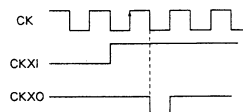
OE : SO OUTPUT ENABLE IN (LOW : ENABLE)
OB2S : INPUT/OUTPUT FORMAT SELECT (AVAILABLE FOR DI, DO, EI, EO, SI, SO)

OB2S	I/O FORMAT
0	STRAIGHT BINARY
1	2'S COMPLEMENT

0: LOW LEVEL
1: HIGH LEVEL

SI0 - SI23 : 24 BIT EXPANSION ACCUMULATED

OUTPUT
CKXO : COEFFICIENT DATA SWITCHING PULSE (DIFFERENTIAL OUTPUT FOR EXPANSION MODE)



DO0 - DO11 : 12 BIT DIGITAL OUT

MOD0	DO DELAY AGAINST DI
0	11 CLOCK
1	7 CLOCK

0: LOW LEVEL
1: HIGH LEVEL

EO0 - EO11 : 12 BIT EXPANSION SHIFT REGISTER OUT

MOD0	EO DELAY AGAINST EI
0	5 CLOCK
1	1 CLOCK

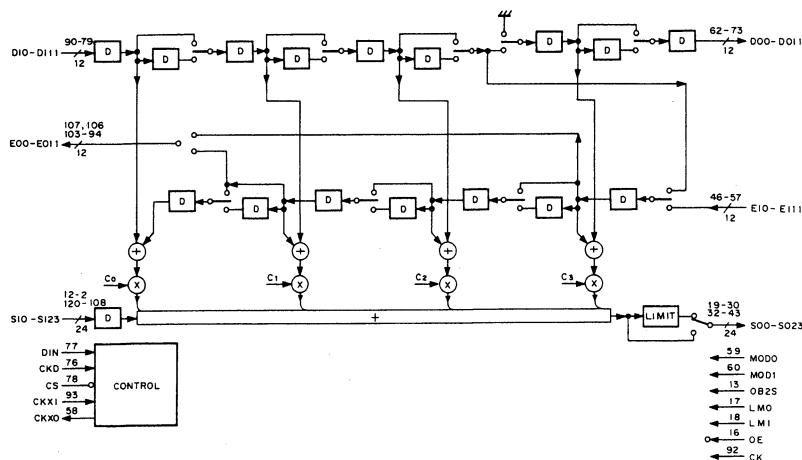
(MOD1 : LOW MODE)

0: LOW LEVEL
1: HIGH LEVEL

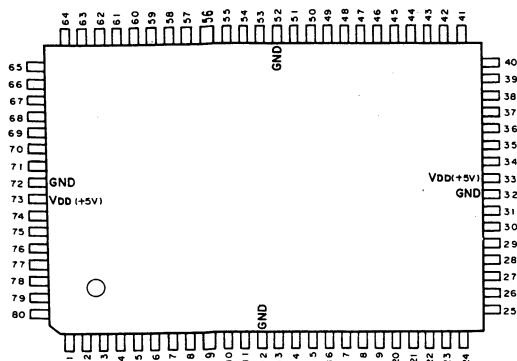
SO0 - SO23 : 24 BIT FILTER OUT

MOD1	MOD0	SO DELAY AGAINST DI	AGAINST SI
0	0	10 CLOCK	3 CLOCK
0	1	7 CLOCK	3 CLOCK
1	0	11 CLOCK	4 CLOCK
1	1	8 CLOCK	4 CLOCK

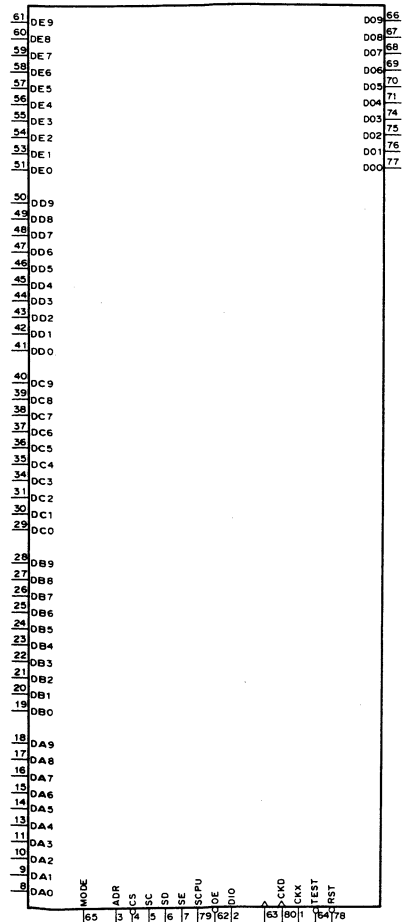
0: LOW LEVEL
1: HIGH LEVEL



CXD8056Q (SONY) FLAT PACKAGE
C-MOS NAM CROSS POINT
- TOP VIEW -



PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	CKX	21	I	DB2	41	I	DD0	61	I	DE9
2	I/O	DIO	22	I	DB3	42	I	DD1	62	I	OE
3	I	ADR	23	I	DB4	43	I	DD2	63	I	CK
4	I	CS	24	I	DB5	44	I	DD3	64	I	TEST
5	I	SC	25	I	DB6	45	I	DD4	65	I	MODE
6	I	SD	26	I	DB7	46	I	DD5	66	O	DO9
7	I	SE	27	I	DB8	47	I	DD6	67	O	DO8
8	I	DA0	28	I	DB9	48	I	DD7	68	O	DO7
9	I	DA1	29	I	DC0	49	I	DD8	69	O	DO6
10	I	DA2	30	I	DC1	50	I	DD9	70	O	DO5
11	I	DA3	31	I	DC2	51	I	DE0	71	O	DO4
12	I	GND	32	I	GND	52	I	GND	72	I	GND
13	I	DA4	33	I	V _{DD}	53	I	DE1	73	I	V _{DD}
14	I	DA5	34	I	DC3	54	I	DE2	74	O	DO3
15	I	DA6	35	I	DC4	55	I	DE3	75	O	DO2
16	I	DA7	36	I	DC5	56	I	DE4	76	O	DO1
17	I	DA8	37	I	DC6	57	I	DE5	77	O	DO0
18	I	DA9	38	I	DC7	58	I	DE6	78	I	RST
19	I	DB0	39	I	DC8	59	I	DE7	79	I	SCPU
20	I	DB1	40	I	DC9	60	I	DE8	80	I	CKD



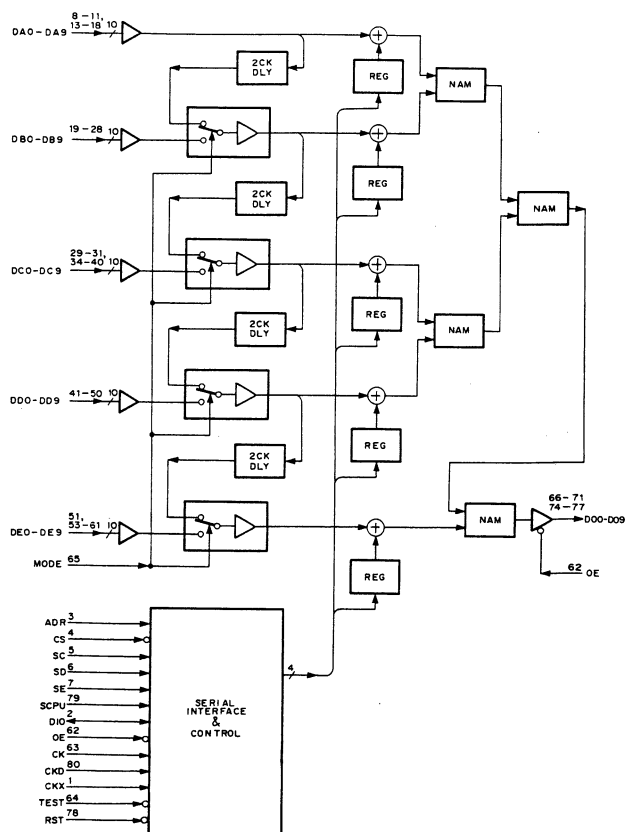
INPUT
CK : SYSTEM CLOCK
CKD : SERIAL INTERFACE CLOCK
CKX : SWITCHING TIMING PULSE
DA0 - DA9 : 10 BIT DIGITAL IN (CH A)
DB0 - DB9 : 10 BIT DIGITAL IN (CH B)
DC0 - DC9 : 10 BIT DIGITAL IN (CH C)
DD0 - DD9 : 10 BIT DIGITAL IN (CH D)
DE0 - DE9 : 10 BIT DIGITAL IN (CH E)
MODE : MODE SELECT
LOW : 1 INPUT MODE (2CK DELAY MODE)
HIGH : 5 INPUT MODE
RST : RESET PULSE
SCPU : SELECT CPU
LOW : MANUAL MODE
HIGH : SERIAL INTERFACE MODE
TEST : TEST MODE (LOW : TEST)

< SERIAL INTERFACE MODE >
ADR : ADDRESS
CS : CHIP SELECT
SC : NOT USED
SD : NOT USED
SE : NOT USED

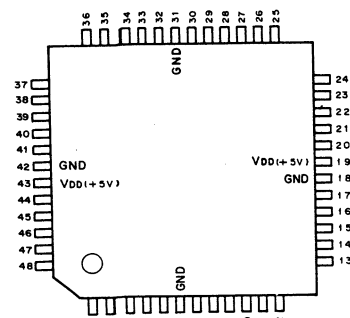
< MANUAL MODE >
ADR : SELECT CH A
CS : SELECT CH B
SC : SELECT CH C
SD : SELECT CH D
SE : SELECT CH E

OUTPUT
DO0 - DO9 : 10 BIT DIGITAL OUT

INPUT/OUTPUT
DIO : SERIAL DATA



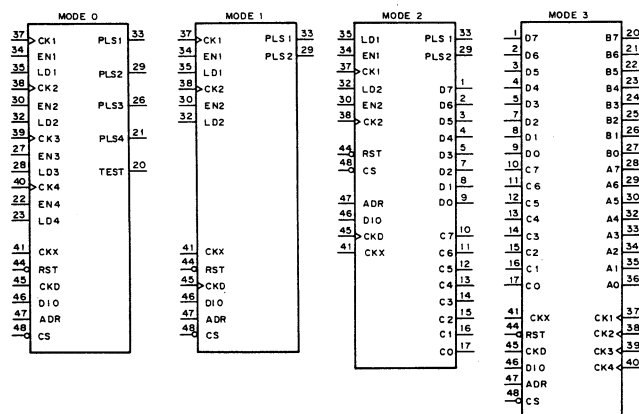
CXD8058Q (SONY) FLAT PACKAGE
C-MOS MEMORY CONTROL
- TOP VIEW -



PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I/O	D7/PA4	13	I/O	C4/PD4	25	O	B2	37	I	CK1
2	I/O	D6/PA3	14	I/O	C3/PD3	26	O	B1/PLS3	38	I	CK2
3	I/O	D5/PA2	15	I/O	C2/PD2	27	I/O	B0/EN3	39	I	CK3
4	I/O	D4/PA1	16	I/O	C1/PD1	28	I/O	A7/LD3	40	I	CK4
5	I/O	D3/PDB	17	I/O	C0/PD0	29	O	A6/PLS2	41	I	CKX
6	-	GND	18	-	GND	30	I/O	A5/EN2	42	-	GND
7	I/O	D2/PDA	19	-	VDD	31	-	GND	43	-	VDD
8	I/O	D1/PD9	20	I/O	B7/TEST	32	I/O	A4/LD2	44	I	RST
9	I/O	D0/PD8	21	O	B6/PLS4	33	O	A3/PLS1	45	I	CKD
10	I/O	C7/PD7	22	I/O	B5/EN4	34	I/O	A2/EN1	46	I/O	DIO
11	I/O	C6/PD6	23	I/O	B4/LD4	35	I/O	A1/LD1	47	I	ADR
12	I/O	C5/PD5	24	O	B3	36	O	A0	48	I	CS

MODE*	FUNCTION
MODE 0	4 CHANNEL (CH1~CH4) CYCLIC PULSE GENERATORS
MODE 1	2 CHANNEL (CH1 AND CH2) CYCLIC PULSE GENERATORS 1 CHANNEL (CH3) CLOCK FREQUENCY COUNTER
MODE 2	2 CHANNEL (CH1 AND CH2) CYCLIC PULSE GENERATORS 2 CHANNEL (CHC AND CHD) 8 BIT SERIAL TO PARALLEL CONVERTOR
MODE 3	4 CHANNEL (CHA~CHD) 8 BIT SERIAL TO PARALLEL CONVERTOR

* THESE 4 MODE CONTROLS ARE DETERMINED AT MODE REGISTER.



< COMMON TERMINALS FOR ALL FUNCTION >

INPUT
ADR : SERIAL ADDRESS
CKD : SERIAL INTERFACE CLOCK
CKX : SWITCHING TIMING PULSE
CS : CHIP SELECT (LOW : ACTIVE)
RST : RESET PULSE (LOW : RESET REGISTERS)

INPUT/OUTPUT
DIO : SERIAL DATA
(MODE CONTROL DATA, REGISTER DATA IN
CH3 CLOCK FREQUENCY COUNTER DATA OUT)

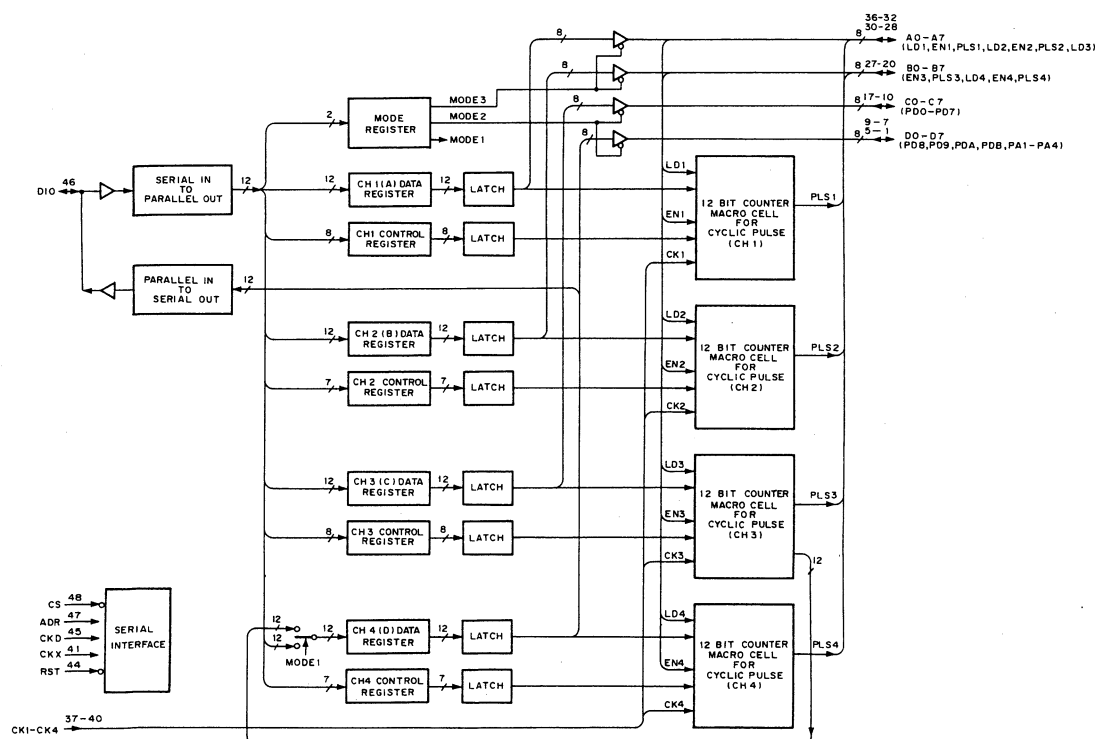
< TERMINALS FOR CYCLIC PULSE GENERATORS >

INPUT
CK1 - CK4 : SYSTEM CLOCK FOR 12 BIT COUNTER OF CH1 - CH4
EN1 - EN4 : ENABLE IN FOR 12 BIT COUNTER OF CH1 - CH4
LD1 - LD4 : LOAD IN FOR 12 BIT COUNTER OF CH1 - CH4

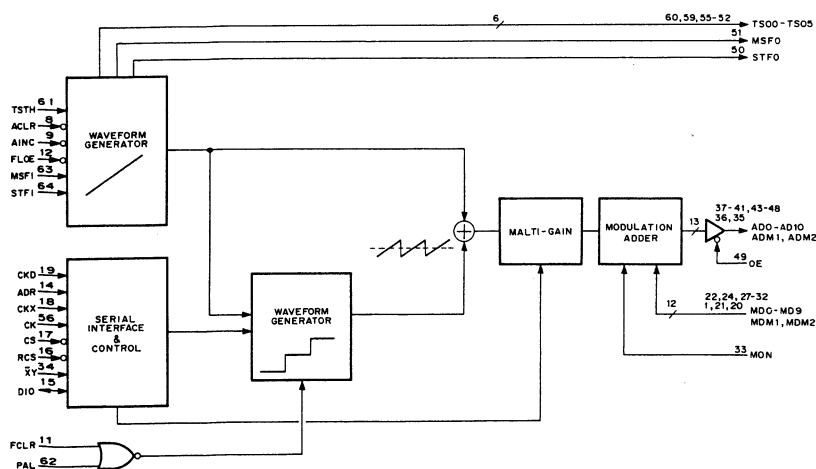
OUTPUT
PLS1 - PLS4 : PULSE OUT (CARRY OUTPUT) OF CH1 - CH4

< TERMINALS FOR 8 BIT SERIAL TO PARALLEL CONVERTORS >

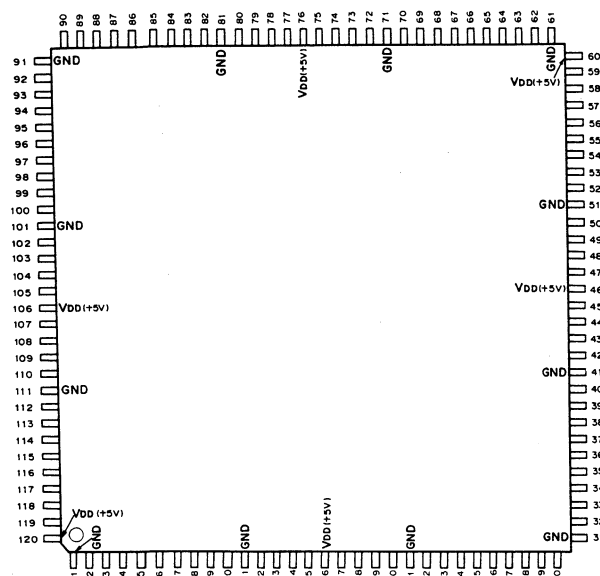
OUTPUT
A7 - A0 : 8 BIT PARALLEL DATA OUT OF CHA
B7 - B0 : 8 BIT PARALLEL DATA OUT OF CHB
C7 - C0 : 8 BIT PARALLEL DATA OUT OF CHC
D7 - D0 : 8 BIT PARALLEL DATA OUT OF CHD



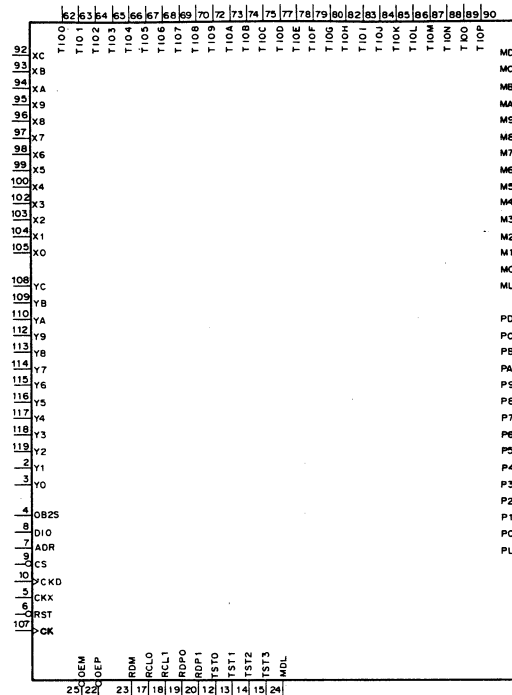
33	XY	AD10	48	INPUT	
33	MON	AD9	47	ACLR	: ADDRESS CLEAR TIMING PULSE
1	MD9	AD8	46	X MODE	: RD INPUT ()
33	MD8	AD7	45	Y MODE	: WD INPUT ()
31	MD7	AD6	44	ADR	: SERIAL ADDRESS
28	MD6	AD5	43	AINC	: ADDRESS INCREMENT TIMING PULSE
31	MD5	AD4	42	X MODE	: HIGH OR LOW (FIXED)
30	MD4	AD3	41	Y MODE	: RD INPUT ()
29	MD3	AD2	40	CK	: SYSTEM CLOCK
28	MD4	AD3	40	CKD	: SERIAL INTERFACE CLOCK
27	MD5	AD2	39	CKX	: SWITCHING TIMING PULSE
27	MD3	AD1	38	CLS	: CHIP SELECT (LOW : ACTIVE)
24	MD2	AD0	37	FCLR	: FIELD CLEAR TIMING PULSE (FOR PAL)
23	MD1	AD0	37	X MODE	: FIELD RESET PULSE
22	MD0	AD0	37	Y MODE	: HIGH OR LOW (FIXED)
22	MD0	ADM1	36	FLOE	: FIELD ODD/EVEN PULSE
21	MDM1	ADM2	35		: HIGH : EVEN FIELD
20	MDM2	T504	52	MD0 - MD9	: 9.2 BIT DIGITAL MODULATION DATA IN
61	TST	T504	53	MDM1, MDM2	: 9.2 BIT DIGITAL MODULATION DATA IN
61	ACLR	T503	54		: (2'S COMPLEMENT)
9	AINC	T502	55	MON	: MODULATION ON/OFF CONTROL
11	FCLR	T501	59	MSFI	: LOW : MODULATION ON
12	FLOE	T500	60		: MULTISHIFT FLAG IN (LOW : ACTIVE)
63	MSFI			Y MODE IC	: PULL UP
64	STFI	MSFO	51	X MODE IC	: CONNECT MSFO OUT
		STFO	50		: OF Y MODE IC TO MSFI
					: OF X MODE IC
49	OE			OE	: OUTPUT ENABLE
55	PAL				: (LOW : ENABLE, HIGH : DISABLE)
14	ADR			PAL	: NTSC/PAL SELECT
17	RCS			RCS	: READ CHIP SELECT (LOW : ACTIVE)
17	CS			STFI	: STREAM FLAG IN (LOW : ACTIVE)
17	CKD			Y MODE IC	: PULL UP
18	CKX			X MODE IC	: CONNECT STFO OUT
30					: OF Y MODE IC TO STFI
					: OF X MODE IC
				XY	: X (HORIZONTAL) / Y (VERTICAL) SELECT
					: LOW : X (HORIZONTAL)
					: HIGH : Y (VERTICAL)
					: ADDRESS GENERATION MODE
					: ADDRESS GENERATION MODE
				OUTPUT	
		ADO - AD10			: 11.2 BIT ADDRESS OUT
		ADM1, ADM2			: 11.2 BIT ADDRESS OUT
		MSFO			: MULTISHIFT FLAG OUT (LOW : ACTIVE)
		TSTO			: TEST
		STFO			: STREAM FLAG OUT (LOW : ACTIVE)
				INPUT/OUTPUT	
		DIO			: SERIAL DATA



CXD8060Q (SONY) FLAT PACKAGE
C-MOS POLAR COORDINATE
- TOP VIEW -



PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	-	GND	31	-	GND	61	-	GND	91	-	GND
2	I	Y1	32	O	P4	62	I/O	TIO0	92	I	XC
3	I	Y0	33	O	P5	63	I/O	TIO1	93	I	X8
4	I	OB2S	34	O	P6	64	I/O	TIO2	94	I	XA
5	I	CKX	35	O	P7	65	I/O	TIO3	95	I	X9
6	I	RST	36	O	P8	66	I/O	TIO4	96	I	X8
7	I	ADR	37	O	P9	67	I/O	TIO5	97	I	X7
8	I/O	DIO	38	O	PA	68	I/O	TIO6	98	I	X6
9	I	CS	39	O	PB	69	I/O	TIO7	99	I	X5
10	I	CKD	40	O	PC	70	I/O	TIO8	100	I	X4
11	-	GND	41	-	GND	71	-	GND	101	-	GND
12	I	TST0	42	O	PD	72	I/O	TIO9	102	I	X3
13	I	TST1	43	O	ML	73	I/O	TIOA	103	I	X2
14	I	TST2	44	O	M0	74	I/O	TIOB	104	I	X1
15	I	TST3	45	O	M1	75	I/O	TIOC	105	I	X0
16	-	VDD	46	-	VDD	76	-	VDD	106	-	VDD
17	I	RCL0	47	O	M2	77	I/O	TIOD	107	I	CK
18	I	RCL1	48	O	M3	78	I/O	TIOE	108	I	YC
19	I	RDP0	49	O	M4	79	I/O	TIOF	109	I	Y8
20	I	RDP1	50	O	M5	80	I/O	TIOG	110	I	Y7
21	-	GND	51	-	GND	81	-	GND	111	-	GND
22	I	OEP	52	O	M6	82	I/O	TIOH	112	I	Y9
23	I	RDM	53	O	M7	83	I/O	TIOI	113	I	Y8
24	I	MDL	54	O	M8	84	I/O	TIOJ	114	I	Y7
25	I	OEM	55	O	M9	85	I/O	TIOK	115	I	Y6
26	O	PL	56	O	MA	86	I/O	TIOL	116	I	Y5
27	O	PO	57	O	MB	87	I/O	TIOM	117	I	Y4
28	O	P1	58	O	MC	88	I/O	TION	118	I	Y3
29	O	P2	59	O	MD	89	I/O	TIOO	119	I	Y2
30	O	P3	60	-	VDD	90	I/O	TIO P	120	-	VDD



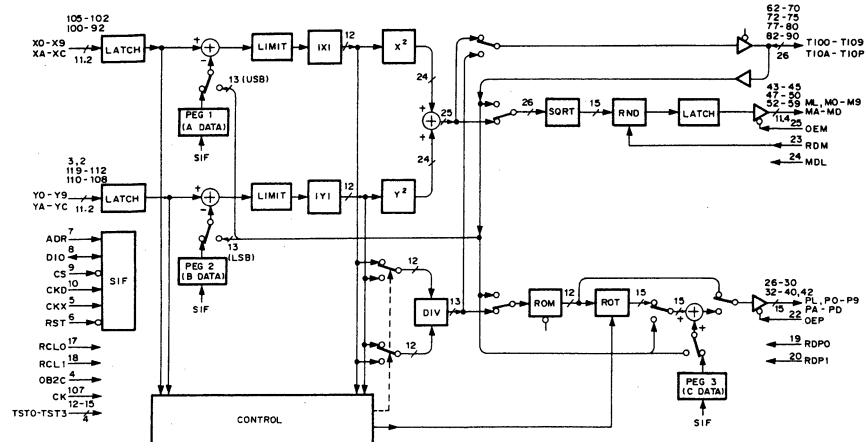
TST3	TST2	TST1	FUNCTION MODE	TIO TERMINAL I/O STATUS
1	1	1	0 $M = \sqrt{(X-A)^2 + (Y-B)^2}$, $P = \tan^{-1} \left(\frac{Y-B}{X-A} \right) + C$ A, B, C: SERIAL DATA	OUTPUT: $(X-A)^2 + (Y-B)^2$ OUTPUT: $ X-A / Y-B $, $ Y-B / X-A $
0	0	0	x $M = \sqrt{(X-A)^2 + (Y-B)^2}$, $P = \tan^{-1} \left(\frac{Y-B}{X-A} \right) + C$ A, B: TIO INPUT, C: SERIAL DATA	INPUT (A AND B DATA)
0	1	1	x $M = \sqrt{(X-A)^2 + (Y-B)^2}$, $P = \tan^{-1} \left(\frac{Y-B}{X-A} \right) + C$ A, B: SERIAL DATA, C: TIO INPUT	INPUT (C DATA)
0	0	1	x $M = \sqrt{R}$, R : TIO INPUT	INPUT (R)
1	1	0	x $M = \tan^{-1} D$, D : TIO INPUT	INPUT (D)

x: DON'T CARE

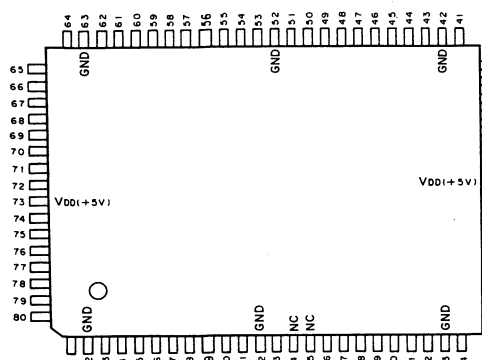
X0 - X9, XA - XC: 11.2 BIT DIGITAL IN
Y0 - Y9, YA - YC: 11.2 BIT DIGITAL IN

OUTPUT
ML, MO - M9, MA - MD: 11.4 BIT DIGITAL OUT (RADIUS DATA)
PL, PO - P9, PA - PD: 15 BIT DIGITAL OUT (ANGLE DATA)

INPUT/OUTPUT
DIO: SERIAL DATA
TIO0 - TIO9, TIOA - TIO P: TEST

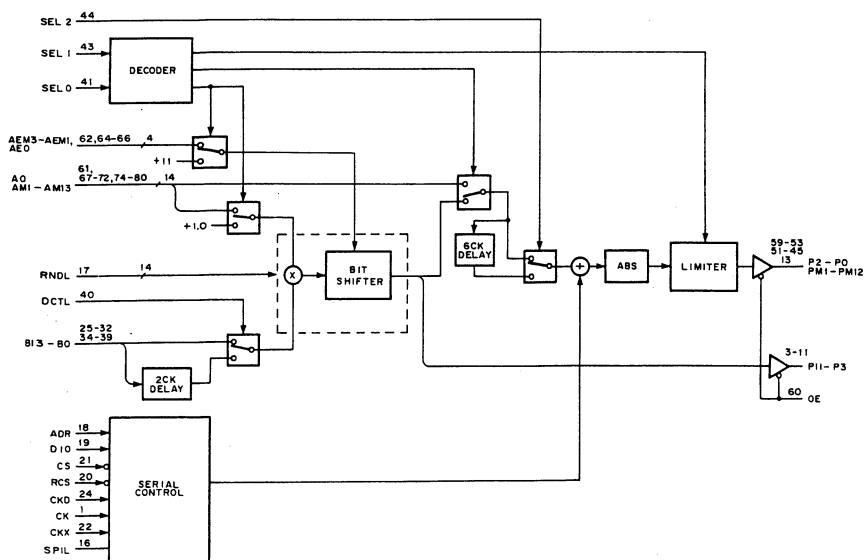


C-MOS SOLID GENERATOR
- TOP VIEW -

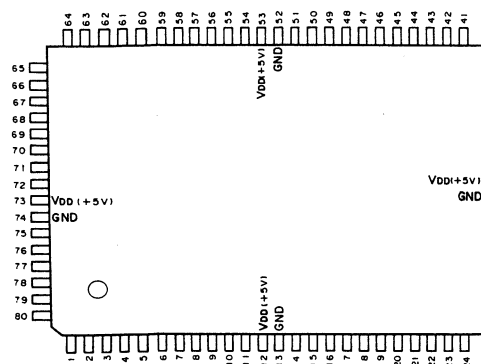


PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	CK	21	I	CS	41	I	SEL0	61	I	A0
2	—	GND	22	I	CKX	42	—	GND	62	I	AE03
3	—	P11	23	—	GND	43	I	SEL1	63	—	GND
4	O	P10	24	I	CKO	44	I	SEL2	64	I	AE02
5	O	P9	25	I	B13	45	O	PM11	65	I	AE01
6	O	P8	26	I	B12	46	O	PM10	66	I	AE0
7	O	P7	27	I	B11	47	O	PM9	67	I	AM1
8	O	P6	28	I	B10	48	O	PM8	68	I	AM2
9	O	P5	29	I	B9	49	O	PM7	69	I	AM3
10	O	P4	30	I	B8	50	O	PM6	70	I	AM4
11	O	P3	31	I	B7	51	O	PM5	71	I	AM5
12	—	GND	32	I	B6	52	—	GND	72	I	AM6
13	O	PM12	33	—	Vpp	53	O	PM4	73	—	Vpp
14	—	NC	34	I	B5	54	O	PM3	74	I	AM7
15	—	NC	35	I	B4	55	O	PM2	75	I	AM8
16	I	SRIL	36	I	B3	56	O	PM1	76	I	AM9
17	I	RNDL	37	I	B2	57	O	P0	77	I	AM10
18	I	ADR	38	I	B1	58	O	P1	78	I	AM11
19	I/O	DIO	39	I	B0	59	O	P2	79	I	AM12
20	I	RCS	40	I	DCTL	60	I	OE	80	I	AM13

24			INPUT	
43	SEL 2	P11	A0, AM1 - AM13	: MANTISSA OF FLOWING-POINT REPRESENTATION
41	SELO	P10	ADR	: SERIAL ADDRESS
		P9	AEO, AEM1 - AEM3	: EXPONENT OF FLOWING-POINT REPRESENTATION
62	AEM3	P8	B0 - B13	: FIXED-POINT REPRESENTATION
64	AEM2	P7	CK	: SYSTEM CLOCK
65	AEM1	P6	CKD	: SERIAL INTERFACE CLOCK
66	AEO	P5	CXK	: SWITCHING TIMING PULSE
		P4	CS	: CHIP SELECT (LOW : ACTIVE)
61	AO	P3	DCTL	: DELAY CONTROL OF B0 - B13 INPUT (LOW : ACTIVE)
67	AM1	P2	OE	: OUTPUT ENABLE (LOW : ENABLE)
68	AM2	P1	RNDL	: MULTIPLIER ROUNDING CONTROL (LOW : ACTIVE)
69	AM3	P0	SELO, SEL1	: SEL (0, 1) = (0, 0) BYPASS A (A IN → P OUT) = (0, 1) BYPASS B (B IN → P OUT) = (1, 0) P = A × B = (1, 1) P = A × B
70	AM4			
71	AM5	PM12	SEL2	: DELAY CONTROL OF P2 - PM12 OUTPUT (HIGH : ACTIVE)
72	AM6	PM11	SRL	: SERIAL CONTROL ENABLE (LOW : ACTIVE)
73	AM7	PM10		
74	AM8	PM9	OUTPUT	
75	AM9	PM8	P0 - P11,	
76	AM10	PM7	PM1 - PM12	: MULTIPLIER OUTPUT (SOLID DATA : P2 - P0, PM1 - PM12)
77	AM11	PM6		
78	AM12	PM5	INPUT/OUTPUT DIO	: SERIAL DATA
80	AM13	PM4		
		PM3		
		PM2		
		PM1		
25	B13			
26	B12			
27	B11			
28	B10			
29	B9			
30	B8			
31	B7			
32	B6			
33	B5			
34	B4			
35	B3			
36	B2			
37	B1			
38	B0			
39	ADR			
40	DE			
41	DCTL			
42	SRL			
43	RNDL			
44	DIO			
45	RCS			
46	CS			
47	CKD			
48	CXK			



CXD8062Q (SONY) FLAT PACKAGE
C-MOS WIPE MIXER
- TOP VIEW -

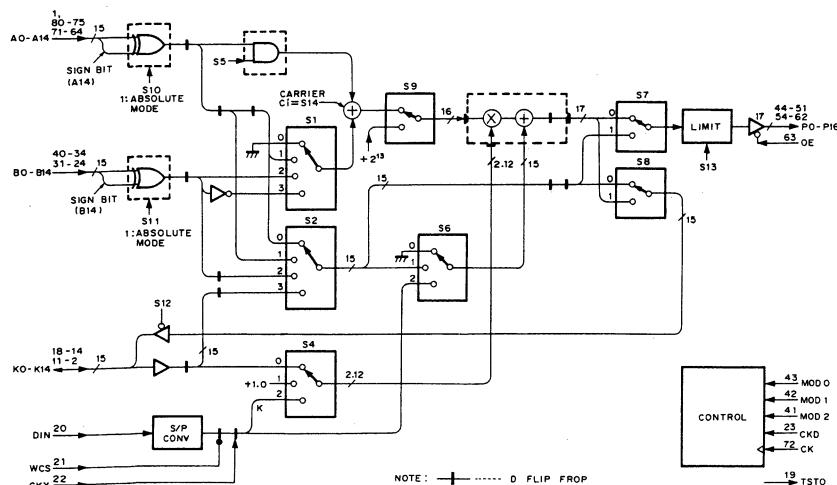
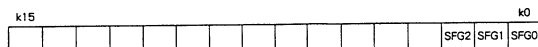


PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	A0	21	I	WCS	41	I	MOD2	61	O	P15
2	I/O	K14	22	I	CKX	42	I	MOD1	62	O	P16
3	I/O	K13	23	I	CKD	43	I	MOD0	63	I	OE
4	I/O	K12	24	I	B14	44	I	P0	64	I	A14
5	I/O	K11	25	I	B13	45	I	P1	65	I	A13
6	I/O	K10	26	I	B12	46	I	P2	66	I	A12
7	I/O	K9	27	I	B11	47	I	P3	67	I	A11
8	I/O	K8	28	I	B10	48	I	P4	68	I	A10
9	I/O	K7	29	I	B9	49	I	P5	69	I	A9
10	I/O	K6	30	I	B8	50	I	P6	70	I	A8
11	I/O	K5	31	I	B7	51	I	P7	71	I	A7
12	-	VDD	32	-	GND	52	-	GND	72	I	CK
13	-	GND	33	-	VDD	53	-	VDD	73	-	VDD
14	I/O	K4	34	I	B6	54	O	P8	74	-	GND
15	I/O	K3	35	I	B5	55	O	P9	75	I	A6
16	I/O	K2	36	I	B4	56	O	P10	76	I	A5
17	I/O	K1	37	I	B3	57	O	P11	77	I	A4
18	I/O	K0	38	I	B2	58	O	P12	78	I	A3
19	O	TSTO	39	I	B1	59	O	P13	79	I	A2
20	I	DIN	40	I	B0	60	O	P14	80	I	A1

MOD2	MOD1	MOD0	SFG2	SFG1	SFG0	FUNCTION	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14
0	0	0	-	-	-	MIXER (REAL TIME K), $P = KA + (1-K)B$	3	2	-	0	1	1	0	0	0	0	0	1	1	1
0	0	1	-	-	-	MIXER (SERIAL K), $P = kA + (1-k)B$	3	2	-	2	1	1	0	0	0	0	0	1	1	1
0	1	0	-	-	-	$K-1-K$ FILTER $P(Z) = (K+Z^{-1}+KZ^{-2}) \cdot Z^{-1} \cdot A$	1	0	-	0	1	1	0	0	0	0	0	1	1	0
0	1	1	-	-	-	0 ASPECT A, $P = k \cdot A$, $K = B$	0	2	-	2	1	0	0	0	0	0	0	0	1	0
						1 ASPECT B, $P = A$, $K = k \cdot B$	2	1	-	2	0	0	1	1	0	0	0	0	1	0
1	0	0	-	-	-	FILTER I, $P = A + B + K$	2	3	-	1	1	1	0	0	0	0	0	1	1	0
1	0	1	-	-	-	FILTER II, $P = k \cdot (A + B) + K$	2	3	-	2	1	1	0	0	0	0	0	1	1	0
1	1	0	0	0	0	ADD MODE, $P = A + B + k$ (SFG2 → ON: A INPUT → ABSOLUTE SFG1 → ON: B INPUT → ABSOLUTE)	2	3	-	1	1	2	0	1	0	0	0	0	0	0
						0 1										0	1			
						1 0										1	0			
						1 1										1	1			
1	1	0	0	0	0	POSITIVE MODE, $P = \max(A, B)$ (SFG1 → ON: A, B INPUTS → ABSOLUTE)	3	or	-	2	1	1	0	1	1	1	1	0	0	0
						0 1										1	1			
						1 0										0	0			
						1 1										1	1			
1	1	1	1	1	1	4 CLOCK DELAY, $P = A$, $K = B$	0	2	-	1	1	0	0	0	0	0	0	0	1	0

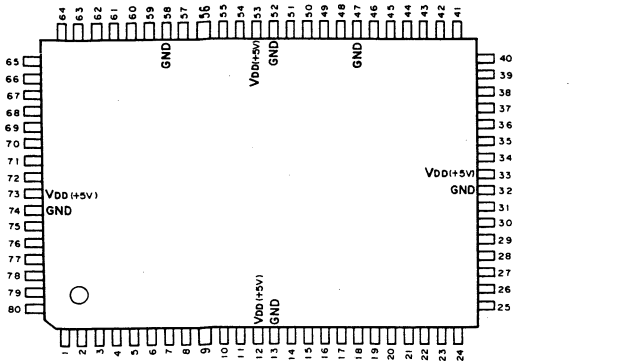
0: LOW LEVEL
1: HIGH LEVEL

NOTE:
SERIAL DATA (DIN)



NOTE: ——— 0 FLIP FROP

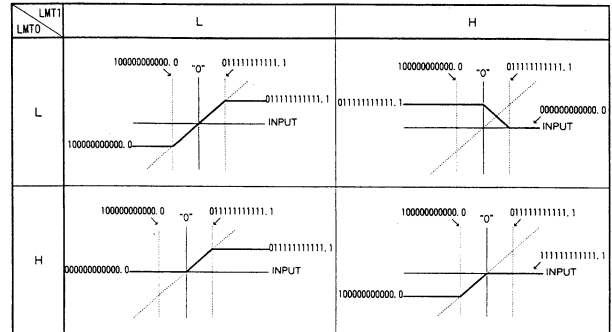
CXD8063Q (SONY) FLAT PACKAGE
C-MOS MATRIX/ENCODER
- TOP VIEW -



(VDD = +5V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	Q12	21	I	I7	41	I	Y2	61	I	LMT0
2	I	Q11	22	I	I6	42	I	Y1	62	I	LMT1
3	I	Q10	23	I	I5	43	I	P0	63	I	RND
4	I	Q9	24	I	I4	44	I	P1	64	I	SMPL
5	I	Q8	25	I	I3	45	I	P2	65	O	TST0
6	I	Q7	26	I	I2	46	I	P3	66	I	TST1
7	I	Q6	27	I	I1	47	-	GND	67	I	CKX
8	I	Q5	28	I	I0	48	I	P4	68	I	RST
9	I	Q4	29	I	Y12	49	I	P5	69	I	CS
10	I	Q3	30	I	Y11	50	I	P6	70	I/O	DIO
11	I	Q2	31	I	Y10	51	I	P7	71	I	ADR
12	-	VDD (+5V)	32	-	GND	52	-	GND	72	-	CKD
13	-	GND	33	-	VDD (+5V)	53	-	VDD (+5V)	73	-	VDD (+5V)
14	I	Q1	34	I	Y9	54	I	P8	74	-	GND
15	I	Q0	35	I	Y8	55	I	P9	75	I	CK
16	I	I12	36	I	Y7	56	I	P10	76	I	SC
17	I	I11	37	I	Y6	57	I	P11	77	I	LALT
18	I	I10	38	I	Y5	58	-	GND	78	I	MOD0
19	I	I9	39	I	Y4	59	I	P12	79	I	MOD1
20	I	I8	40	I	Y3	60	I	OE	80	I	MOD2

INPUT
ADR : SERIAL ADDRESS
CK : SYSTEM CLOCK
CKD : SERIAL INTERFACE CLOCK
CKX : SWITCHING TIMING PULSE
CS : CHIP SELECT (LOW : ACTIVE)
I0 - I12 : I IN (2'S COMPLEMENT 12.1 BIT)
LALT : LINE ALTERNATE PULSE
< FOR D II PAL >
(HIGH : EVEN, LOW : ODD)
< FOR D II NTSC >
(HIGH : CONTINUOUS)
LMT0, LMT1 : P OUTPUT LIMITER MODE CONTROL



MOD0 - MOD2 : MODE SELECT

MOD2	MOD1	MOD0	MODE AND FUNCTION
0	0	0	MATRIX, $P = (Y+a) \times d + (I+b) \times e + (O+C) \times f + g$
0	0	1	NOT USED
0	1	0	ROTATION I, $P = (Y+a) \times d + (I+b) \times e + (O+C) \times (-f) + g$
0	1	1	ROTATION II, $P = (Y+a) \times d + (I+C) \times f + (O+b) \times e + g$
1	0	0	NOT USED
1	0	1	NOT USED
1	1	0	ENCODER (NTSC)
1	1	1	ENCODER (PAL)

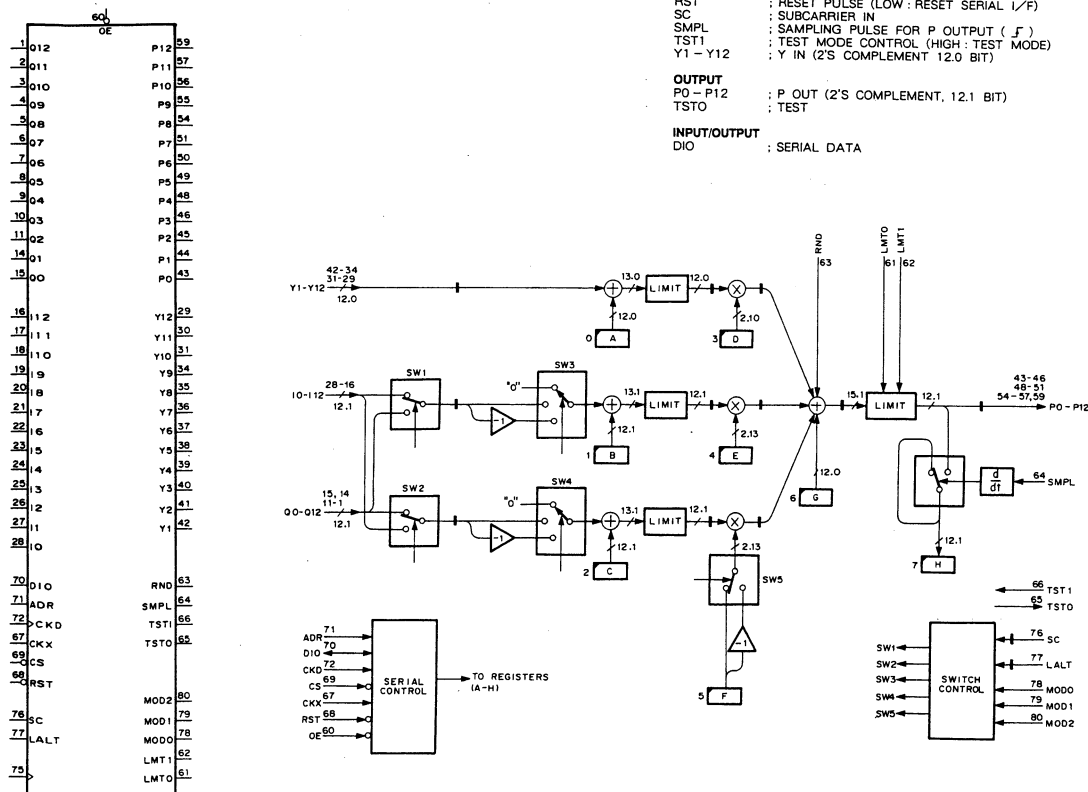
a, b, c, ...g : REGISTER DATA FROM SERIAL DATA

0 : LOW LEVEL
1 : HIGH LEVEL

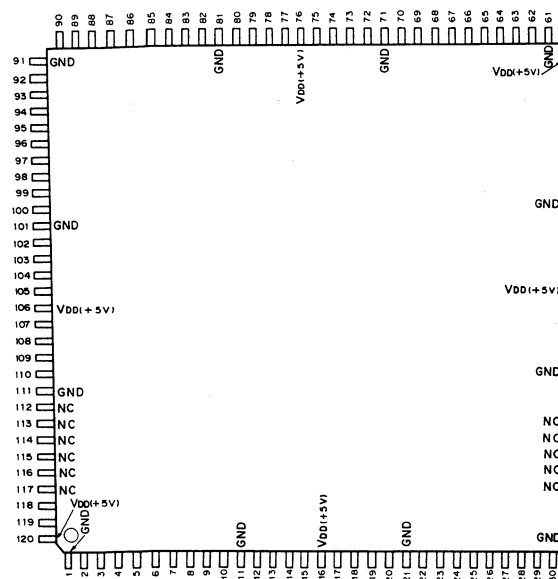
OE : P OUTPUT ENABLE CONTROL (LOW : ENABLE)
Q0 - Q12 : Q IN (2'S COMPLEMENT 12.1 BIT)
RND : ROUNDING P OUTPUT CONTROL (HIGH : ACTIVE)
RST : RESET PULSE (LOW : RESET SERIAL I/F)
SC : SUBCARRIER IN
SMPL : SAMPLING PULSE FOR P OUTPUT (f)
TST1 : TEST MODE CONTROL (HIGH : TEST MODE)
Y1 - Y12 : Y IN (2'S COMPLEMENT 12.0 BIT)

OUTPUT
P0 - P12 : P OUT (2'S COMPLEMENT, 12.1 BIT)
TST0 : TEST

INPUT/OUTPUT
DIO : SERIAL DATA



CXD8065Q (SONY) FLAT PACKAGE
C-MOS KEY PROCESSOR
- TOP VIEW -



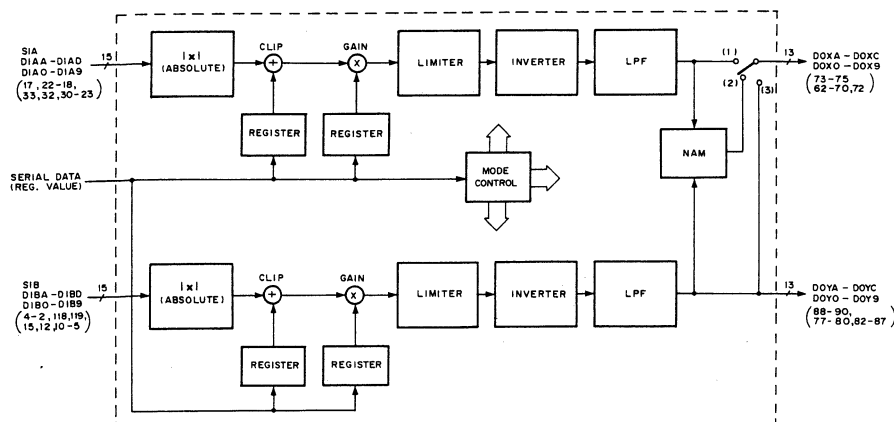
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	-	GND	31	-	GND	61	-	GND	91	-	GND
2	I	DIB8	32	I	DIA1	62	O	DOX0	92	I	OEYL
3	I	DIB8	33	I	DIA0	63	O	DOX1	93	I	TF
4	I	DIB8	34	-	NC	64	O	DOX2	94	I	TE
5	I	DIB8	35	-	NC	65	O	DOX3	95	I	TD
6	I	DIB8	36	-	NC	66	O	DOX4	96	I	TC
7	I	DIB8	37	-	NC	67	O	DOX5	97	I	TB
8	I	DIB8	38	-	NC	68	O	DOX6	98	I	TA
9	I	DIB8	39	I	WA0	69	O	DOX7	99	I	T9
10	I	DIB8	40	I	WA1	70	O	COX8	100	I	T8
11	-	GND	41	-	GND	71	-	GND	101	-	GND
12	I	DIB8	42	I	WA2	72	O	DOX9	102	I	T7
13	I	DIB8	43	I	ID0	73	O	DOXA	103	I	T6
14	I	DIB8	44	I	ID1	74	O	DOXB	104	I	T5
15	I	DIB8	45	I	ID2	75	O	DOXC	105	I	T4
16	-	VDD	46	-	VDD	76	-	VDD	106	-	VDD
17	I	SIA	47	I	ID3	77	O	DOY0	107	I	T3
18	I	DIAD	48	I	ID4	78	O	DOY1	108	I	T2
19	I	DIAC	49	I	ID5	79	O	DOY2	109	I	T1
20	I	DIAB	50	I	CK	80	O	DOY3	110	I	T0
21	-	GND	51	-	GND	81	-	GND	111	-	GND
22	I	DIAA	52	I	CKD	82	O	DOY4	112	-	NC
23	I	DIA9	53	I	CLR	83	O	DOY5	113	-	NC
24	I	DIA8	54	I	TEST	84	O	DOY6	114	-	NC
25	I	DIA7	55	I	CS	85	O	DOY7	115	-	NC
26	I	DIA6	56	I	CKX	86	O	DOY8	116	-	NC
27	I	DIA5	57	I	ADR	87	O	DOY9	117	-	NC
28	I	DIA4	58	I/O	DIO	88	O	DOYA	118	I	SIB
29	I	DIA3	59	I	OEYL	89	O	DOYB	119	I	DIB0
30	I	DIA2	60	-	VDD	90	O	DOYC	120	-	VDD

118	SIB	92	OEYL
119	DIB0	90	DOYC
119	DIB0	89	DOYB
119	DIB0	88	DOYA
119	DIB0	87	DOY9
119	DIB0	86	DOY8
119	DIB0	85	DOY7
119	DIB0	84	DOY6
119	DIB0	83	DOY5
119	DIB0	82	DOY4
119	DIB0	81	DOY3
119	DIB0	80	DOY2
119	DIB0	79	DOY1
119	DIB0	78	DOY0
119	DIB0	77	DOY0
119	DIB0	76	DOY0
119	DIB0	75	DOY0
119	DIB0	74	DOY0
119	DIB0	73	DOY0
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119	DIB0	7	DOY0
119	DIB0	6	DOY0
119	DIB0	5	DOY0
119	DIB0	4	DOY0
119	DIB0	3	DOY0
119	DIB0	2	DOY0
119	DIB0	1	DOY0

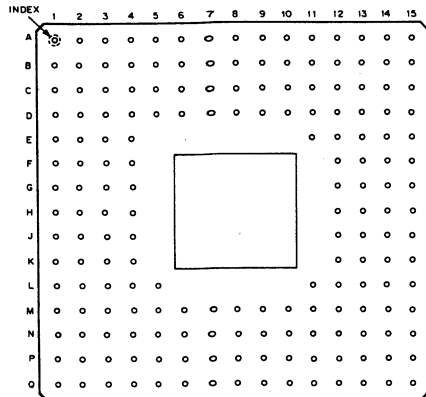
INPUT
ADR : SERIAL ADDRESS
CK : SYSTEM CLOCK
CKD : SERIAL INTERFACE CLOCK
CKX : SWITCHING TIMING PULSE
CS : CHIP SELECT (LOW : ACTIVE)
DIAA - DIA9 : DATA A IN
DIB0 - DIB9 : DATA B IN
RST : RESET
ID0 - ID5 : IC ADDRESS SELECT
SIA, SIB : SIGN BIT OF "A", "B" IN
OEYL, OEYL : ENABLE CONTROL OF "X", "Y" OUT (LOW : ENABLE)
TA - TF : TEST TERMINAL
T0 - T9 : MODE SELECT FOR TEST

OUTPUT
DOXA - DOXC : DATA X OUT
DOY0 - DOY9 : DATA Y OUT
DOYA - DOYC : DATA Y OUT
DOY0 - DOY9 : DATA Y OUT

INPUT/OUTPUT
DIO : SERIAL DATA

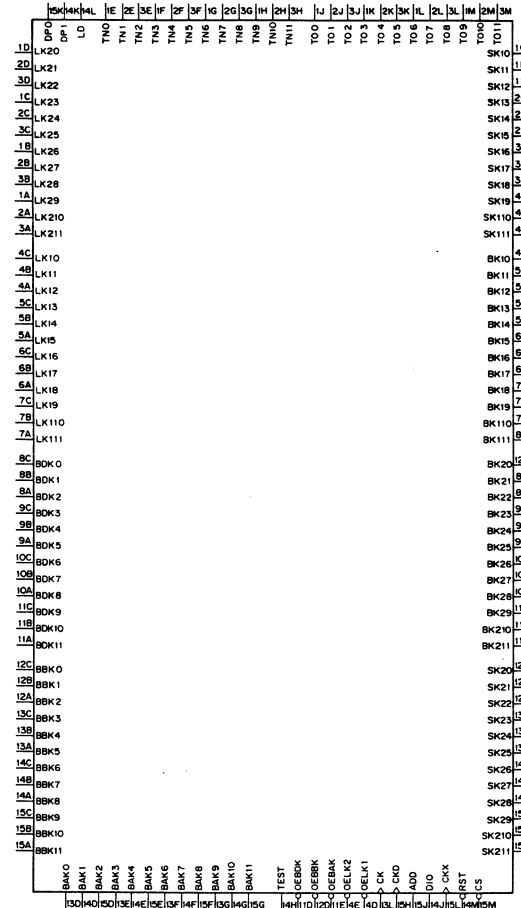


CXD8066G (SONY)
C-MOS KEY CONTROL
- BOTTOM VIEW -



VDD = +5V

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1A	O	LK29	1D	O	LK20	13H	-	NC	2N	I	SK15
2A	O	LK210	2D	O	LK21	14H	I	TEST	3N	I	SK18
3A	O	LK211	3D	O	LK22	15H	I	CKD	4N	I	SK111
4A	O	LK12	4D	I	OELK1	1J	I	TO0	5N	I	BK14
5A	O	LK15	5D	-	GND	2J	I	TO1	6N	I	BK17
6A	O	LK18	6D	-	GND	3J	I	TO2	7N	I	BK110
7A	O	LK111	7D	-	VDD	4J	-	VDD	8N	I	BK22
8A	O	BDK2	8D	-	GND	12J	-	VDD	9N	I	BK25
9A	O	BDK5	9D	-	VDD	13J	-	NC	10N	I	BK28
10A	O	BDK8	10D	-	GND	14J	I/O	DIO	11N	I	BK211
11A	O	BDK11	11D	I	OEBDK	15J	I	ADR	12N	I	SK22
12A	O	BBK2	12D	I	OEBBK	1K	I	TO3	13N	I	SK25
13A	O	BBK5	13D	O	BAK0	2K	I	TO4	14N	I	SK28
14A	O	BBK8	14D	O	BAK1	3K	I	TO5	15N	I	SK211
15A	O	BBK11	15D	O	BAK2	4K	-	GND	1P	I	SK11
1B	O	LK26	1E	I	TN0	12K	-	GND	2P	I	SK14
2B	O	LK27	2E	I	TN1	13K	-	NC	3P	I	SK17
3B	O	LK28	3E	I	TN2	14K	O	DP1	4P	I	SK110
4B	O	LK11	4E	I	OELK2	15K	O	DP0	5P	I	BK13
5B	O	LK14	11E	I	OEBAK	1L	I	TO6	6P	I	BK16
6B	O	LK17	12E	-	GND	2L	I	TO7	7P	I	BK19
7B	O	LK110	13E	O	BAK3	3L	I	TO8	8P	I	BK21
8B	O	BDK1	14E	O	BAK4	4L	-	GND	9P	I	BK24
9B	O	BDK4	15E	O	BAK5	5L	-	NC	10P	I	BK27
10B	O	BDK7	1F	I	TN3	11L	-	NC	11P	I	BK210
11B	O	BDK10	2F	I	TN4	12L	-	NC	12P	I	SK21
12B	O	BBK1	3F	I	TN5	13L	I	CK	13P	I	SK24
13B	O	BBK4	4F	-	GND	14L	I	LD	14P	I	SK27
14B	O	BBK7	12F	-	GND	15L	I	CKX	15P	I	SK210
15B	O	BBK10	13F	O	BAK6	1M	I	TO9	1Q	I	SK10
1C	O	LK23	14F	O	BAK7	2M	I	TO10	2Q	I	SK13
2C	O	LK24	15F	O	BAK8	3M	I	TO11	3Q	I	SK16
3C	O	LK25	1G	I	TN6	4M	I	BK10	4Q	I	SK19
4C	O	LK10	2G	I	TN7	5M	I	BK11	5Q	I	BK12
5C	O	LK13	3G	I	TN8	6M	-	GND	6Q	I	BK15
6C	O	LK16	4G	-	VDD	7M	-	VDD	7Q	I	BK18
7C	O	LK19	12G	-	VDD	8M	-	GND	8Q	I	BK11
8C	O	BDK0	13G	O	BAK9	9M	-	VDD	9Q	I	BK23
9C	O	BDK3	14G	O	BAK10	10M	-	GND	10Q	I	BK26
10C	O	BDK6	15G	O	BAK11	11M	-	GND	11Q	I	BK29
11C	O	BDK9	1H	I	TN9	12M	I	BK20	12Q	I	SK20
12C	O	BBK0	2H	I	TN10	13M	-	NC	13Q	I	SK23
13C	O	BBK3	3H	I	TN11	14M	I	RST	14Q	I	SK26
14C	O	BBK6	4H	-	GND	15M	I	CS	15Q	I	SK29
15C	O	BBK9	12H	-	GND	1N	I	SK12			



INPUT

- ADR : SERIAL ADDRESS
- BK10 - BK111 : DATA INPUT BK1
- BK20 - BK211 : DATA INPUT BK2
- CK : SYSTEM CLOCK
- CKD : SERIAL INTERFACE PULSE
- CKX : SWITCHING TIMING PULSE
- CS : CHIP SELECT
- LD : LOAD (*1)
- OEBAK : ENABLE CONTROL OF BGA OUT (LOW : ENABLE)
- OEBBK : ENABLE CONTROL OF BGB OUT (LOW : ENABLE)
- OEBDK : ENABLE CONTROL OF BD OUT (LOW : ENABLE)
- OELK1, OELK0 : ENABLE CONTROL OF LK OUT (LOW : ENABLE)
- SK10 - SK111 : DATA INPUT SK1
- SK20 - SK211 : DATA INPUT SK2
- TEST : TEST MODE (HIGH : TEST)
- TN0 - TN11 : DATA INPUT TN
- TO0 - TO11 : DATA INPUT TO

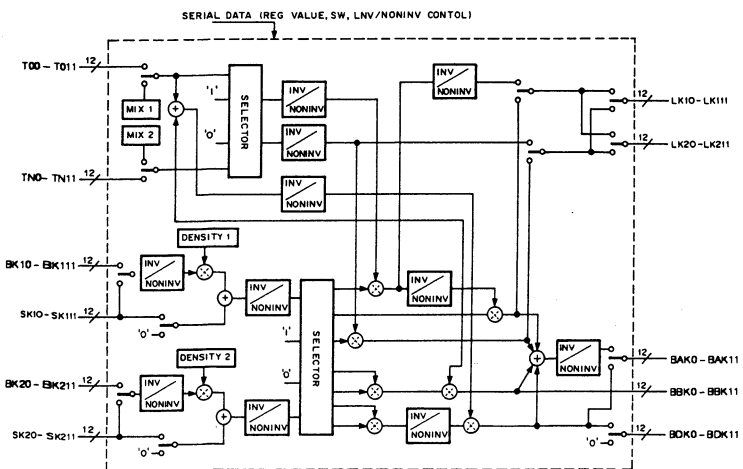
OUTPUT

- BAK0 - BAK11 : DATA OUTPUT BAK
- BBK0 - BBK11 : DATA OUTPUT BBK
- BDK0 - BDK11 : DATA OUTPUT BDK
- DP0 - DP1 : TIMING PULSE (*1)
- LK10 - LK111 : DATA OUTPUT LK1
- LK20 - LK211 : DATA OUTPUT LK2

INPUT/OUTPUT

- DIO : SERIAL DATA

NOTE : *1TIMING-GENERATOR



CXD8067G (SONY)
C-MOS MULTIPLIER
- BOTTOM VIEW -

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
A	INDEX	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
B	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
C	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
D	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
E	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
F	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
G	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
H	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
J	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
K	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
L	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
M	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
N	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
P	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Q	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
R	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
S	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O

(V_{DD} = +5V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1A	I	BAV0	3J	I	DK111	7A	I	BBV0	12C	I	KF16	15L	I	PA3
1B	I	DK20	3K	I	PD2	7B	I	BBV1	12D	-	GND	15M	O	DO11
1C	I	DK23	3L	I	PD5	7C	I	BBV2	12E	-	NC	15N	I	BAK9
1D	I	DK26	3M	I	PD9	7D	-	NC	12P	-	V _{DD}	15P	I	BAK6
1E	I	DK29	3N	I	PD12	7P	I	PD14	12Q	I	BBK0	15Q	I	BBK9
1F	I	DK10	3P	I	LK22	7Q	I	LK19	12R	I	BBK1	15R	I	BBK10
1G	I	DK13	3Q	I	LK26	7R	I	LK110	12S	I	BBK2	15S	I	BBK11
1H	I	DK16	3R	I	LK28	7S	I	LK111	13A	I	KF16	16A	I	KF21
1J	I	DK19	3S	I	LK211	8A	I	BBV3	13B	I	KF17	16B	I	KF24
1K	I	PD0	4A	I	BAV3	8B	I	BBV4	13C	I	KF18	16C	I	KF27
1L	I	PD3	4B	I	BAV4	8C	I	BBV5	13D	-	V _{DD}	16D	I	KF210
1M	I	PD7	4C	I	BAV5	8D	-	GND	13P	-	GND	16E	I	ADR
1N	I	PD10	4D	-	NC	8P	-	V _{DD}	13Q	I	BBK3	16F	I	RST
1P	I	LK20	4E	-	V _{DD}	8Q	I	BDK0	13R	I	BBK4	16G	I	SC
1Q	I	LK23	4F	-	GND	8R	I	BDK1	13S	I	BBK5	16H	O	DO1
1R	I	LK26	4G	-	GND	8S	I	BDK2	14A	I	KF19	16J	O	DO4
1S	I	LK29	4H	-	V _{DD}	8A	I	BBV6	14B	I	KF110	16K	O	DO6
2A	I	BAV1	4J	-	GND	9B	I	BBV7	14C	I	KF111	16L	O	DO8
2B	I	DK21	4K	-	GND	9C	I	BBV8	14D	I	CS	16M	O	DO10
2C	I	DK24	4L	I	PD6	9D	-	GND	14E	-	GND	16N	I	BAK10
2D	I	DK27	4M	-	V _{DD}	9P	-	GND	14F	-	V _{DD}	16P	I	BAK7
2E	I	DK210	4N	-	GND	9Q	I	BDK3	14G	I	OE	16Q	I	BAK4
2F	I	DK11	4P	I	PD13	9R	I	BDK4	14H	-	GND	16R	I	BAK2
2G	I	DK14	4Q	I	LK10	9S	I	BDK5	14J	-	GND	16S	I	BAK0
2H	I	DK17	4R	I	LK11	10A	I	BBV9	14K	-	V _{DD}	17A	I	KF20
2J	I	DK110	4S	I	LK12	10B	I	BBV10	14L	-	GND	17B	I	KF23
2K	I	PD1	5A	I	BAV6	10C	I	BBV11	14M	-	GND	17C	I	KF26
2L	I	PD4	5B	I	BAV7	10D	-	V _{DD}	14N	-	V _{DD}	17D	I	KF29
2M	I	PD8	5C	I	BAV8	10P	-	GND	14P	I	TEST	17E	I	CKD
2N	I	PD11	5D	-	GND	10Q	I	BDK6	14Q	I	BBK6	17F	I	CKX
2P	I	LK21	5P	-	V _{DD}	10R	I	BDK7	14R	I	BBK7	17G	I	CK
2Q	I	LK24	5Q	I	LK13	10S	I	BDK8	14S	I	BBK8	17H	O	DO0
2R	I	LK27	5R	I	LK14	11A	I	KF10	15A	I	KF22	17J	O	DO3
2S	I	LK210	5S	I	LK15	11B	I	KF11	15B	I	KF25	17K	O	DO5
3A	I	BAV2	6A	I	BAV9	11C	I	KF12	15C	I	KF28	17L	O	DO7
3B	I	DK22	6B	I	BAV10	11D	-	NC	15D	I	KF211	17M	O	DO9
3C	I	DK25	6C	I	BAV11	11P	I	PD15	15E	I/O	DIO	17N	I	BAK11
3D	I	DK28	6D	-	V _{DD}	11Q	I	BDK9	15F	I	SMPL	17P	I	BAK8
3E	I	DK211	6P	-	GND	11R	I	BDK10	15G	I	LALT	17Q	I	BAK5
3F	I	DK12	6Q	I	LK16	11S	I	BDK11	15H	O	DO2	17R	I	BAK3
3G	I	DK15	6R	I	LK17	12A	I	KF13	15J	I	PA1	17S	I	BAK1
3H	I	DK18	6S	I	LK18	12B	I	KF14	15K	I	PA2			

	1B	2B	3B	1C	2C	3C	1D	2D	3D	1E	2E	3E	1F	2F	3F	1G	2G	3G	1H	2H	3H	1J	2J	3J
17A	DK80	DK81	DK82	DK83	DK84	DK85	DK86	DK87	DK88	DK89	DK90	DK91	DK40	DK41	DK42	DK43	DK44	DK45	DK46	DK47	DK48	DK49	DK40	DK41
17B	KFB0	KFB1	KFB2	KFB3	KFB4	KFB5	KFB6	KFB7	KFB8	KFB9	KFB10	KFB11	KFA0	KFA1	KFA2	KFA3	KFA4	KFA5	KFA6	KFA7	KFA8	KFA9	KFA10	KFA11
17C	LKB0	LKB1	LKB2	LKB3	LKB4	LKB5	LKB6	LKB7	LKB8	LKB9	LKB10	LKB11	LKA0	LKA1	LKA2	LKA3	LKA4	LKA5	LKA6	LKA7	LKA8	LKA9	LKA10	LKA11
17D	BDK0	BDK1	BDK2	BDK3	BDK4	BDK5	BDK6	BDK7	BDK8	BDK9	BDK10	BDK11	BBK0	BBK1	BBK2	BBK3	BBK4	BBK5	BBK6	BBK7	BBK8	BBK9	BBK10	BBK11
17E	SC	LALT	SMPL	TEST	DOE	CKD	ADR	DIO	CKX	CRST	CKCS	DO0	DO1	DO2	DO3	DO4	DO5	DO6	DO7	DO8	DO9	DO10	DO11	
17F	16G	15G	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	16H	15H	14H	13H	12H	11H	10H	9H
17G	16H	15H	14H	13H	12H	11H	10H	9H	8H	7H	6H	5H	4H	3H	2H	1H	16I	15I	14I	13I	12I	11I	10I	9I
17H	16I	15I	14I	13I	12I	11I	10I	9I	8I	7I	6I	5I	4I	3I	2I	1I	16J	15J	14J	13J	12J	11J	10J	9J
17I	16J	15J	14J	13J	12J	11J	10J	9J	8J	7J	6J	5J	4J	3J	2J	1J	16K	15K	14K	13K	12K	11K	10K	9K
17J	16K	15K	14K	13K	12K	11K	10K	9K	8K	7K	6K	5K	4K	3K	2K	1K	16L	15L	14L	13L	12L	11L	10L	9L
17K	16L	15L	14L	13L	12L	11L	10L	9L	8L	7L	6L	5L	4L	3L	2L	1L	16M	15M	14M	13M	12M	11M	10M	9M
17L	16M	15M	14M	13M	12M	11M	10M	9M	8M	7M	6M	5M	4M	3M	2M	1M	16N	15N	14N	13N	12N	11N	10N	9N
17M	16N	15N	14N	13N	12N	11N	10N	9N	8N	7N	6N	5N	4N	3N	2N	1N	16O	15O	14O	13O	12O	11O	10O	9O
17N	16O	15O	14O	13O	12O	11O	10O	9O	8O	7O	6O	5O	4O	3O	2O	1O	16P	15P	14P	13P	12P	11P	10P	9P
17O	16P	15P	14P	13P	12P	11P	10P	9P	8P	7P	6P	5P	4P	3P	2P	1P	16Q	15Q	14Q	13Q	12Q	11Q	10Q	9Q
17P	16Q	15Q	14Q	13Q	12Q	11Q	10Q	9Q	8Q	7Q	6Q	5Q	4Q	3Q	2Q	1Q	16R	15R	14R	13R	12R	11R	10R	9R
17Q	16R	15R	14R	13R	12R	11R	10R	9R	8R	7R	6R	5R	4R	3R	2R	1R	16S	15S	14S	13S	12S	11S	10S	9S
17R	16S	15S	14S	13S	12S	11S	10S	9S	8S	7S	6S	5S	4S	3S	2S	1S	16T	15T	14T	13T	12T	11T	10T	9T
17S	16T	15T	14T	13T	12T	11T	10T	9T	8T	7T	6T	5T	4T	3T	2T	1T	16U	15U	14U	13U	12U	11U	10U	9U
17T	16U	15U	14U	13U	12U	11U	10U	9U	8U	7U	6U	5U	4U	3U	2U	1U	16V	15V	14V	13V	12V	11V	10V	9V
17U	16V	15V	14V	13V	12V	11V	10V	9V	8V	7V	6V	5V	4V	3V	2V	1V	16W	15W	14W	13W	12W	11W	10W	9W
17V	16W	15W	14W	13W	12W	11W	10W	9W	8W	7W	6W	5W	4W	3W	2W	1W	16X	15X	14X	13X	12X	11X	10X	9X
17W	16X	15X	14X	13X	12X	11X	10X	9X	8X	7X	6X	5X	4X	3X	2X	1X	16Y	15Y	14Y	13Y	12Y	11Y	10Y	9Y
17X	16Y	15Y	14Y	13Y	12Y	11Y	10Y	9Y	8Y	7Y	6Y	5Y	4Y	3Y	2Y	1Y	16Z	15Z	14Z	13Z	12Z	11Z	10Z	9Z
17Y	16Z	15Z	14Z	13Z	12Z	11Z	10Z	9Z	8Z	7Z	6Z	5Z	4Z	3Z	2Z	1Z	16AA	15AA	14AA	13AA	12AA	11AA	10AA	9AA
17Z	16AA	15AA	14AA	13AA	12AA	11AA	10AA	9AA	8AA	7AA	6AA	5AA	4AA	3AA	2AA	1AA	16AB	15AB	14AB	13AB	12AB	11AB	10AB	9AB
17AA	16AB	15AB	14AB	13AB	12AB	11AB	10AB	9AB	8AB	7AB	6AB	5AB	4AB	3AB	2AB	1AB	16AC	15AC	14AC	13AC	12AC	11AC	10AC	9AC
17AB	16AC	15AC	14AC	13AC	12AC	11AC	10AC	9AC	8AC	7AC	6AC	5AC	4AC	3AC	2AC	1AC	16AD	15AD	14AD	13AD	12AD	11AD	10AD	9AD
17AC	16AD	15AD	14AD	13AD	12AD	11AD	10AD	9AD	8AD	7AD	6AD	5AD	4AD	3AD	2AD	1AD	16AE	15AE	14AE	13AE	12AE	11AE	10AE	9AE
17AD	16AE	15AE	14AE	13AE	12AE	11AE	10AE	9AE	8AE	7AE	6AE	5AE	4AE	3AE	2AE	1AE	16AF	15AF	14AF	13AF	12AF	11AF	10AF	9AF
17AE	16AF	15AF	14AF	13AF	12AF	11AF	10AF	9AF	8AF	7AF	6AF	5AF	4AF	3AF	2AF	1AF	16AG	15AG	14AG	13AG	12AG	11AG	10AG	9AG
17AF	16AG	15AG	14AG	13AG	12AG	11AG	10AG	9AG	8AG	7AG	6AG	5AG	4AG	3AG	2AG	1AG	16AH	15AH	14AH	13AH	12AH	11AH	10AH	9AH
17AG	16AH	15AH	14AH	13AH	12AH	11AH	10AH	9AH	8AH	7AH	6AH	5AH	4AH	3AH	2AH	1AH	16AI	15AI	14AI	13AI	12AI	11AI	10AI	9AI
17AH	16AI	15AI	14AI	13AI	12AI	11AI	10AI	9AI	8AI	7AI	6AI	5AI	4AI	3AI	2AI	1AI	16AJ	15AJ	14AJ	13AJ	12AJ	11AJ	10AJ	9AJ
17AI	16AJ	15AJ	14AJ	13AJ	12AJ	11AJ	10AJ	9AJ	8AJ	7AJ	6AJ	5AJ	4AJ	3AJ	2AJ	1AJ	16AK	15AK	14AK	13AK	12AK	11AK	10AK	9AK
17AJ	16AK	15AK	14AK	13AK	12AK	11AK	10AK	9AK	8AK	7AK	6AK	5AK	4AK	3AK	2AK	1AK	16AL	15AL	14AL	13AL	12AL	11AL	10AL	9AL
17AK	16AL	15AL	14AL	13AL	12AL	11AL	10AL	9AL	8AL	7AL	6AL	5AL	4AL	3AL	2AL	1AL	16AM	15AM	14AM	13AM	12AM	11AM	10AM	9AM
17AL	16AM	15AM	14AM	13AM	12AM	11AM	10AM	9AM	8AM	7AM	6AM	5AM	4AM	3AM	2AM	1AM	16AN	15AN	14AN	13AN	12AN	11AN	10AN	9AN
17AM	16AN	15AN	14AN	13AN	12AN	11AN	10AN	9AN	8AN	7AN	6AN	5AN	4AN	3AN	2AN	1AN	16AO	15AO	14AO	13AO	12AO	11AO	10AO	9AO
17AO	16AO	15AO	14AO	13AO	12AO	11AO	10AO	9AO	8AO	7AO	6AO	5AO	4AO	3AO	2AO	1AO	16AP	15AP	14AP	13AP	12AP	11AP	10AP	9AP
17AP	16AP	15AP	14AP	13AP	12AP	11AP	10AP	9AP	8AP	7AP	6AP	5AP	4AP	3AP	2AP	1AP	16AQ	15AQ	14AQ	13AQ	12AQ	11AQ	10AQ	9AQ
17AQ	16AQ	15AQ	14AQ	13AQ	12AQ	11AQ	10AQ	9AQ	8AQ	7AQ	6AQ	5AQ	4AQ	3AQ	2AQ	1AQ	16AR	15AR	14AR	13AR	12AR	11AR	10AR	9AR
17AR	16AR	15AR	14AR	13AR	12AR	11AR	10AR	9AR	8AR	7AR	6AR	5AR	4AR	3AR	2AR	1AR	16AS	15AS	14AS	13AS	12AS	11AS	10AS	9AS
17AS	16AS	15AS	14AS	13AS	12AS	11AS	10AS	9AS	8AS	7AS	6AS	5AS	4AS	3AS	2AS	1AS	16AT	15AT	14AT	13AT	12AT	11AT	10AT	9AT
17AT	16AT	15AT	14AT	13AT	12AT	11AT	10AT	9AT	8AT	7AT	6AT	5AT	4AT	3AT	2AT	1AT	16AU	15AU	14AU	13AU	12AU	11AU	10AU	9AU
17AU	16AU	15AU	14AU	13AU	12AU	11AU	10AU	9AU	8AU	7AU	6AU	5AU	4AU	3AU	2AU	1AU	16AV	15AV	14AV	13AV	12AV	11AV	10AV	9AV
17AV	16AV	15AV	14AV	13AV	12AV	11AV	10AV	9AV	8AV	7AV	6AV	5AV	4AV	3AV	2AV	1AV	16AW	15AW	14AW	13AW	12AW	11AW	10AW	9AW
17AW	16AW	15AW	14AW	13AW	12AW	11AW	10AW	9AW	8AW	7AW	6AW	5AW	4AW	3AW	2AW	1AW	16AX	15AX	14AX	13AX	12AX	11AX	10AX	9AX
17AX	16AX	15AX	14AX	13AX	12AX	11AX	10AX	9AX	8AX	7AX	6AX	5AX	4AX	3AX	2AX	1AX	16AY	15AY	14AY	13AY	12AY	11AY	10AY	9AY
17AY	16AY	15AY	14AY	13AY	12AY	11AY	10AY	9AY	8AY	7AY	6AY	5AY	4AY	3AY	2AY	1AY	16AZ	15AZ	14AZ	13AZ	12AZ	11AZ	10AZ	9AZ
17AZ	16AZ	15AZ	14AZ	13AZ	12AZ	11AZ	10AZ	9AZ	8AZ	7AZ	6AZ	5AZ	4AZ	3AZ	2AZ	1AZ	16BA	15BA	14BA	13BA	12BA	11BA	10BA	9BA
17BA	16BA	15BA	14BA	13BA	12BA	11BA	10BA	9BA	8BA	7BA	6BA	5BA	4BA	3BA	2BA	1BA	16BB	15BB	14BB	13BB	12BB	11BB	10BB	9BB
17BB	16BB	15BB	14BB	13BB	12BB	11BB	10BB	9BB	8BB	7BB	6BB	5BB	4BB	3BB	2BB	1BB	16BC	15BC	14BC	13BC	12BC	11BC	10BC	9BC
17BB	16BB	15BB	14BB	13BB	12BB	11BB	10BB	9BB	8BB	7BB	6BB	5BB	4BB	3BB	2BB	1BB	16BD	15BD	14BD	13BD	12BD	11BD	10BD	9BD
17BB	16BB	15BB	14BB	13BB	12BB	11BB	10BB	9BB	8BB	7BB	6BB	5BB	4BB	3BB	2BB	1BB	16BE	15BE	14BE	13BE	12BE	11BE	10BE	9BE
17BB	16BB	15BB	14BB	13BB	12BB	11BB	10BB	9BB	8BB	7BB	6BB	5BB	4BB	3BB	2BB	1BB	16BF	15BF	14BF	13BF	12BF	11BF	10BF	9BF
17BB	16BB	15BB	14BB	13BB	12BB	11BB	10BB	9BB	8BB	7BB	6BB	5BB	4BB	3BB	2BB	1BB	16BG	15BG	14BG	13BG	12BG	11BG	10BG	9BG
17BB	16BB	15BB	14BB	13BB	12BB	11BB	10BB	9BB	8BB	7BB	6BB	5BB	4BB	3BB	2BB	1BB	16BH	15BH	14BH	13BH	12BH	11BH	10BH	9BH
17BB	16BB	15BB	14BB	13BB	12BB	11BB	10BB	9BB	8BB	7BB	6BB	5BB	4BB	3BB	2BB	1BB	16BI	15BI	14BI	13BI	12BI	11BI	10BI	9BI
17BB	16BB	15BB	14BB	13BB	12BB	11BB	10BB	9BB	8BB	7BB	6BB	5BB	4BB	3BB	2BB	1BB	16BJ	15BJ	14BJ	13BJ	12BJ	11BJ	10BJ	9BJ
17BB	16BB	15BB	14BB	13BB	12BB	11BB	10BB	9BB	8BB	7BB	6BB	5BB	4BB	3BB	2BB	1BB	16BK	15BK	14BK	13BK	12BK	11BK	10BK	9BK
17BB	16BB	15BB	14BB	13BB	12BB	11BB	10BB	9BB	8BB	7BB	6BB	5BB	4BB	3BB	2BB	1BB	16BL	15BL	14BL	13BL	12BL	11BL	10BL	9BL
17BB	16BB	15BB	14BB	13BB	12BB	11BB	10BB	9BB	8BB	7BB	6BB	5BB	4BB	3BB	2BB	1BB	16BM	15BM	14BM	13BM	12BM	11BM	10BM	9BM

INPUT

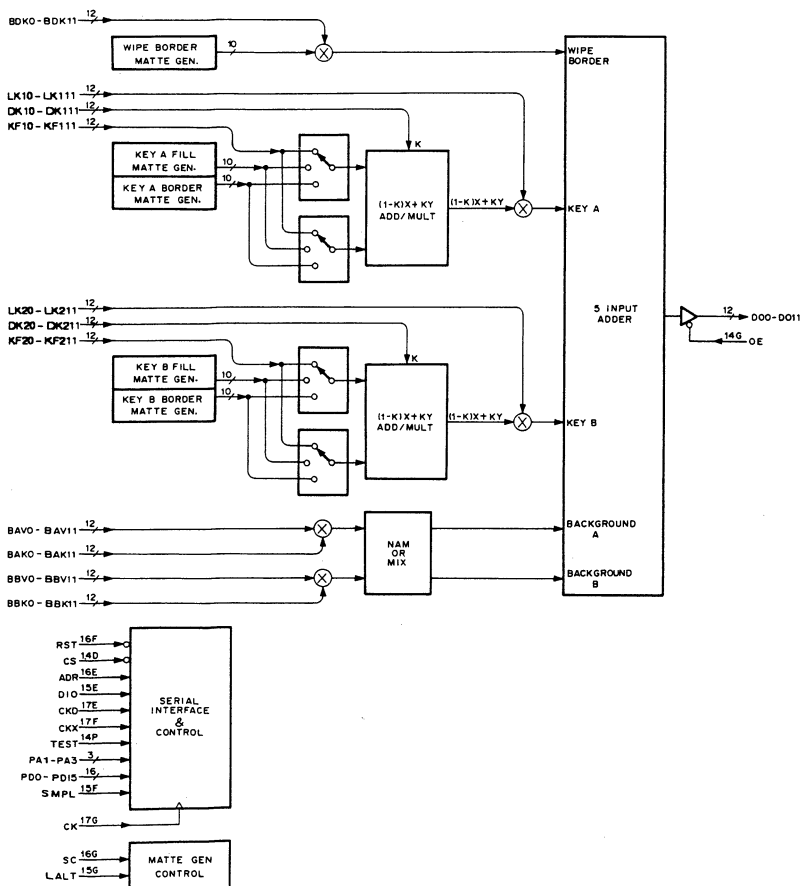
ADR : SERIAL ADDRESS
BAK0 - BAK11 : 12 BIT DIGITAL BACKGROUND A KEY IN
BAV0 - BAV11 : 12 BIT DIGITAL BACKGROUND A VIDEO IN
BBK0 - BBK11 : 12 BIT DIGITAL BACKGROUND B KEY IN
BBV0 - BBV11 : 12 BIT DIGITAL BACKGROUND B VIDEO IN
BDK0 - BDK11 : 12 BIT DIGITAL WIPE BORDER KEY IN
CK : SYSTEM CLOCK
CKD : SERIAL INTERFACE CLOCK
CKX : SWITCHING TIMING PULSE
CS : CHIP SELECT (LOW : ACTIVE)
DK10 - DK111 : 12 BIT DIGITAL DELAY KEY 1 IN
DK20 - DK211 : 12 BIT DIGITAL DELAY KEY 2 IN
KF10 - KF111 : 12 BIT DIGITAL KEY 1 FILL VIDEO IN
KF20 - KF211 : 12 BIT DIGITAL KEY 2 FILL VIDEO IN
LALT : LINE ALTERNATE PULSE
< FOR D II PAL >
(HIGH : EVEN, LOW : ODD)
< FOR D II NTSC >
(HIGH : CONTINUOUS)
LK10 - LK111 : 12 BIT DIGITAL LAST KEY 1 IN
LK20 - LK211 : 12 BIT DIGITAL LAST KEY 2 IN
OE : OUTPUT ENABLE (LOW : ENABLE)
P1 - P3 : PARALLEL ADDRESS IN FOR TEST OF SERIAL COMMUNICATION
PD0 - PD15 : PARALLEL DATA IN FOR TEST OF SERIAL COMMUNICATION
RST : RESET PULSE (LOW : RESET REGISTER)
SC : SUBCARRIER PULSE
SMPL : SAMPLING PULSE
TEST : TEST MODE (HIGH : TEST, LOW : NORMAL)

OUTPUT

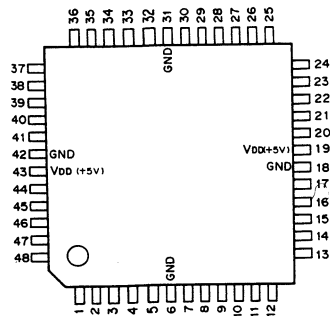
DO0 - DO11 : 12 BIT DIGITAL VIDEO OUT

INPUT/OUTPUT

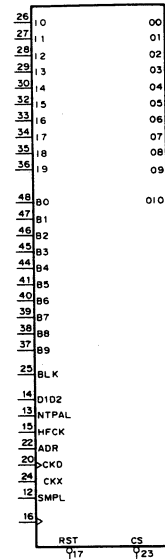
DIO : SERIAL DATA



CXD8189AQ (SONY) FLAT PACKAGE
C-MOS OUTPUT PROCESSOR
- TOP VIEW -



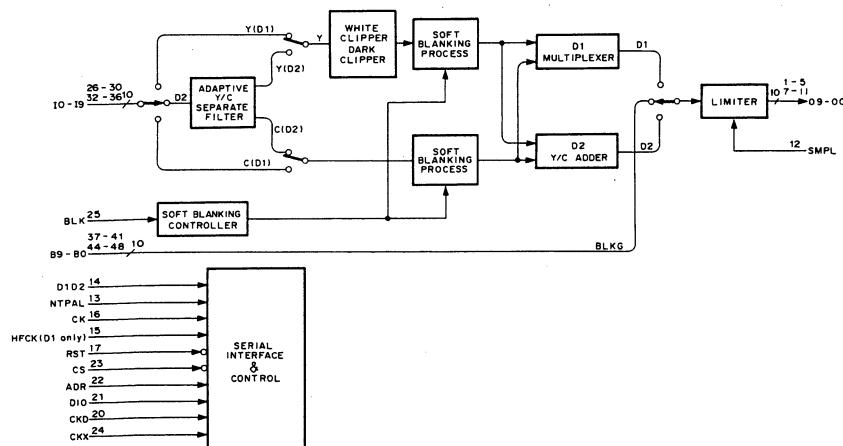
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	O	O9	13	I	NTPAL	25	I	BLK	37	I	B9
2	O	O8	14	I	D1D2	26	I	I0	38	I	B8
3	O	O7	15	I	HFCK	27	I	I1	39	I	B7
4	O	O6	16	I	CK	28	I	I2	40	I	B6
5	O	O5	17	I	RST	29	I	I3	41	I	B5
6	-	GND	18	-	GND	30	I	I4	42	-	GND
7	O	O4	19	-	VDD	31	-	GND	43	-	VDD
8	O	O3	20	I	CKD	32	I	I5	44	I	B4
9	O	O2	21	I/O	DIO	33	I	I6	45	I	B3
10	O	O1	22	I	ADR	34	I	I7	46	I	B2
11	O	O0	23	I	CS	35	I	I8	47	I	B1
12	I	SMPL	24	I	CKX	36	I	I9	48	I	B0



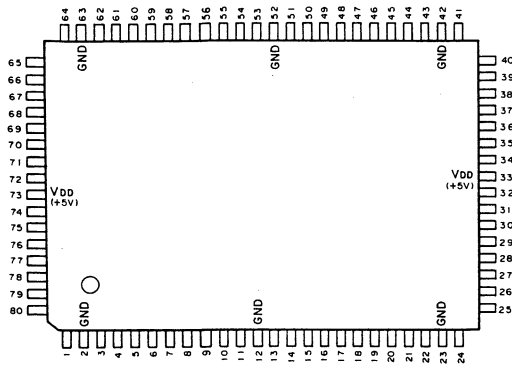
INPUT
ADR : SERIAL ADDRESS
B0 - B9 : 10 BIT DIGITAL BLANKING IN
BLK : BLANKING GATE PULSE
CK : SYSTEM CLOCK
CKD : SERIAL INTERFACE CLOCK
CKX : SWITCHING TIMING PULSE
CS : CHIP SELECT (LOW : ACTIVE)
D1D2 : D1/D2 FORMAT SELECT
(LOW : D1, HIGH : D2)
HFCK : HALF CLOCK (13.5MHz) (ONLY D1 MODE)
I0 - I9 : 10 BIT DIGITAL VIDEO IN (D1 OR D2 FORMAT)
NTPAL : NTSC/PAL FORMAT SELECT (ONLY D2 MODE)
(LOW : D2 NTSC, HIGH : D2 PAL)
RST : RESET PULSE (LOW : RESET)
SMPL : SAMPLING PULSE FOR O OUTPUT (F)

OUTPUT
O0 - O9 : 10 BIT DIGITAL VIDEO OUT

INPUT/OUTPUT
DIO : SERIAL DATA



CXD8190Q (SONY) FLAT PACKAGE
C-MOS SUPER MULTIPLEX-DEMULTIPLEXER
- TOP VIEW -



PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	OE	21	I/O	B7	41	I	RST	61	I/O	E7
2	-	GND	22	I/O	B8	42	-	GND	62	I/O	E8
3	I/O	A0	23	-	GND	43	I/O	D0	63	-	GND
4	I/O	A1	24	I/O	B9	44	I/O	D1	64	I/O	E9
5	I/O	A2	25	I/O	C0	45	I/O	D2	65	I/O	F0
6	I/O	A3	26	I/O	C1	46	I/O	D3	66	I/O	F1
7	I/O	A4	27	I/O	C2	47	I/O	D4	67	I/O	F2
8	I/O	A5	28	I/O	C3	48	I/O	D5	68	I/O	F3
9	I/O	A6	29	I	C4	49	I/O	D6	69	I	F4
10	I/O	A7	30	I	C5	50	I/O	D7	70	I	F5
11	I/O	A8	31	I	C6	51	I/O	D8	71	I	F6
12	-	GND	32	I	C7	52	-	GND	72	I	F7
13	I/O	A9	33	-	VDD	53	I/O	D9	73	-	VDD
14	I/O	B0	34	I	C8	54	I/O	E0	74	I	F8
15	I/O	B1	35	I	C9	55	I/O	E1	75	I	F9
16	I/O	B2	36	I/O	DIO/M3	56	I/O	E2	76	I	CK1
17	I/O	B3	37	I	CS/M2	57	I/O	E3	77	I	SMPL/OFS
18	I/O	B4	38	I	ADR/M1	58	I/O	E4	78	I	CK2
19	I/O	B5	39	I	CKD/M0	59	I/O	E5	79	I	SIFM
20	I/O	B6	40	I	CKX/MIV	60	I/O	E6	80	I	CURSOR

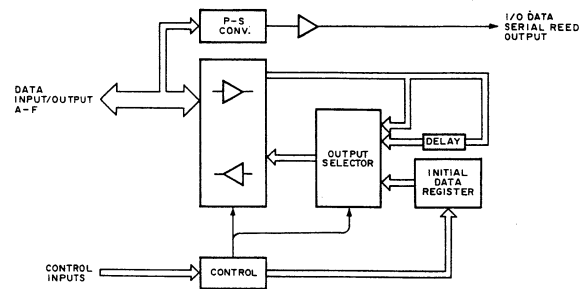
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
3	A0	D0	43	D0	A0
4	A1	D1	44	D1	A1
5	A2	D2	45	D2	A2
6	A3	D3	46	D3	A3
7	A4	D4	47	D4	A4
8	A5	D5	48	D5	A5
9	A6	D6	49	D6	A6
10	A7	D7	50	D7	A7
11	A8	D8	51	D8	A8
12	A9	D9	52	D9	A9
13	A0	D0	53	D0	A0
14	B0	E0	54	E0	B0
15	B1	E1	55	E1	B1
16	B2	E2	56	E2	B2
17	B3	E3	57	E3	B3
18	B4	E4	58	E4	B4
19	B5	E5	59	E5	B5
20	B6	E6	60	E6	B6
21	B7	E7	61	E7	B7
22	B8	E8	62	E8	B8
23	B9	E9	63	E9	B9
24	C0	F0	64	F0	C0
25	C1	F1	65	F1	C1
26	C2	F2	66	F2	C2
27	C3	F3	67	F3	C3
28	C4	F4	68	F4	C4
29	C5	F5	69	F5	C5
30	C6	F6	70	F6	C6
31	C7	F7	71	F7	C7
32	C8	F8	72	F8	C8
33	C9	F9	73	F9	C9
40	CKX/MIV	SMPL/OFS	77	SMPL/OFS	CKX/MIV
39	CKD/M0	CURSOR	80	CURSOR	CKD/M0
38	ADR/M1	CK1	76	CK1	ADR/M1
37	CS/M2	CK2	78	CK2	CS/M2
36	DIO/M3	OE	41	OE	DIO/M3
79	SIFM	RST	41	RST	SIFM

COMMON TERMINALS
A0 - A9 : CHA 10 BIT DIGITAL INPUT/OUTPUT
B0 - B9 : CHB 10 BIT DIGITAL INPUT/OUTPUT
C0 - C9 : CHC 10 BIT DIGITAL INPUT/OUTPUT
CK1 : SYSTEM CLOCK INPUT
CK2 : SUB-CLOCK INPUT
CURSOR : CURSOR INPUT
D0 - D9 : CHD 10 BIT DIGITAL INPUT/OUTPUT
E0 - E9 : CHE 10 BIT DIGITAL INPUT/OUTPUT
F0 - F9 : CHF 10 BIT DIGITAL INPUT/OUTPUT
OE : OUTPUT ENABLE INPUT (LOW : ENABLE)
RST : RESET PULSE INPUT (LOW : RESET)
SIFM : SERIAL INTERFACE MODE (SIF)
MANUAL MODE SELECT INPUT
(LOW : SERIAL INTERFACE MODE,
HIGH : MANUAL MODE)

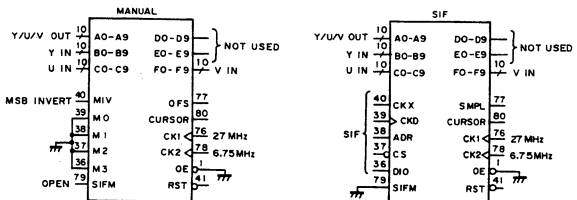
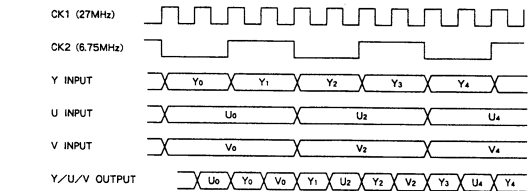
TERMINALS OF MANUAL MODE
M0 - M3 : MODE SELECT INPUT (4 BIT)
MIV : MSB INVERT CONTROL INPUT
(HIGH : INVERT MSB)
OFS : CURSOR MSB INVERT CONTROL INPUT

TERMINALS OF SIF MODE
ADR : SERIAL ADDRESS INPUT
CKD : SERIAL INTERFACE CLOCK INPUT
CKX : SWITCHING TIMING PULSE INPUT
CS : CHIP SELECT INPUT (LOW : ACTIVE)
DIO : SERIAL DATA INPUT/OUTPUT
SMPL : SAMPLING PULSE INPUT

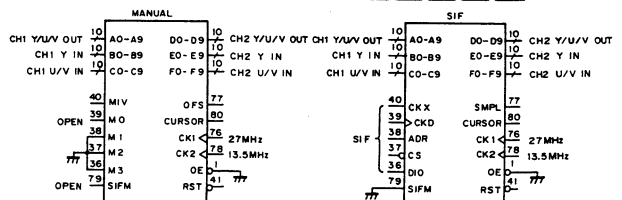
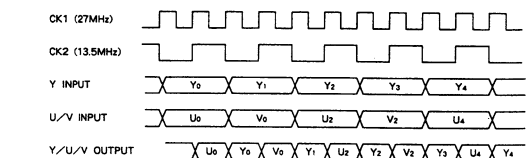
BLOCK DIAGRAM



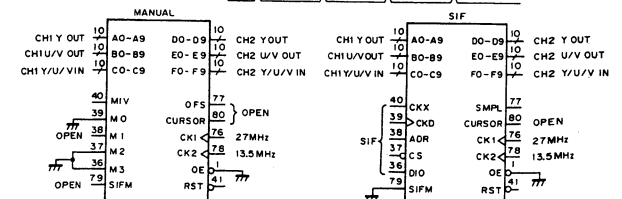
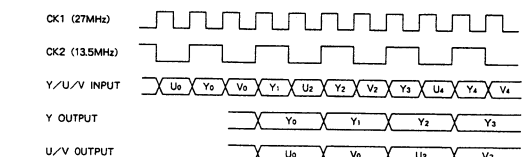
FUNCTION OF MODE 0 - MODE 12
MODE 0 : D1 Y, U, V MULTIPLEXER



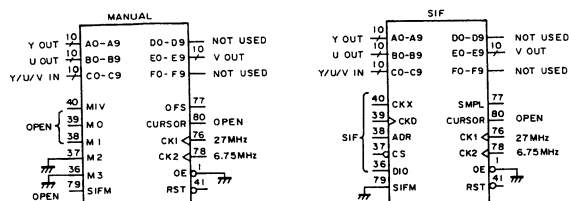
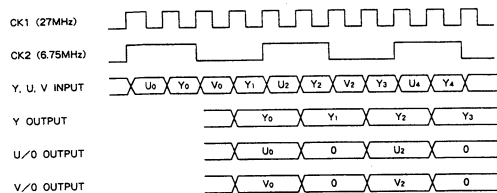
MODE 1 : D1 Y, U/V, MULTIPLEXER (2CH)



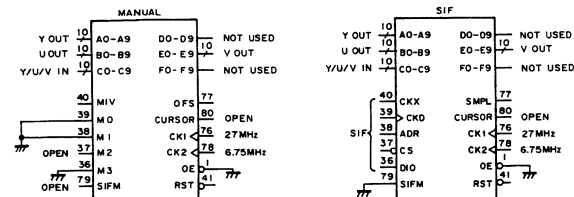
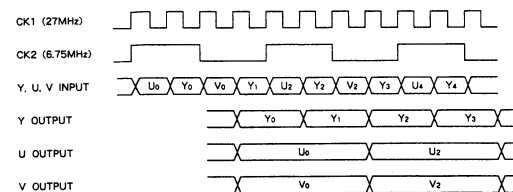
MODE 2 : D1 Y, U/V DEMULTIPLEXER (2CH)



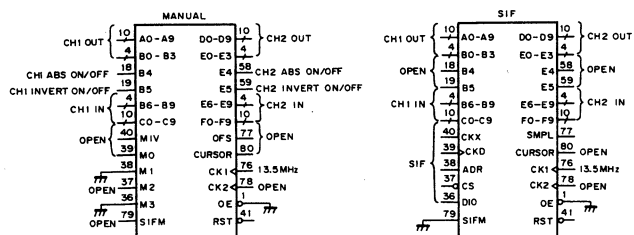
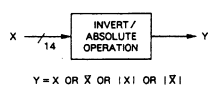
MODE 3 : D1 Y, U, V DEMULTIPLEXER (WITH 0 INSERT FUNCTION)



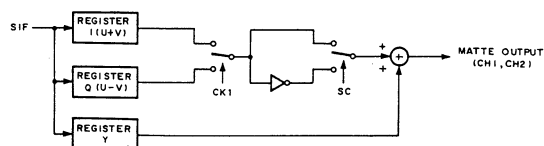
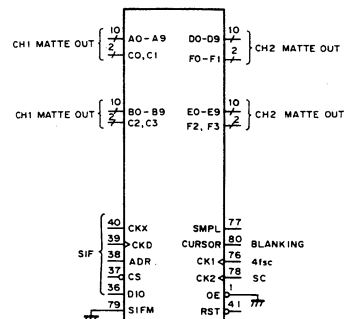
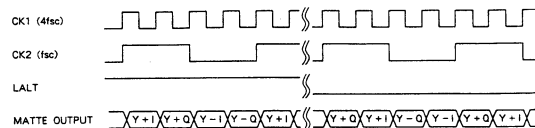
MODE 4 : D1 Y, U, V DEMULTIPLEXER



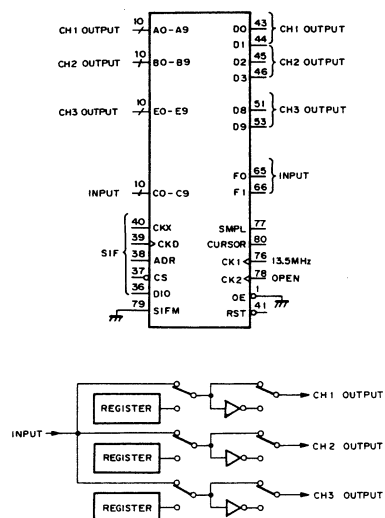
MODE 5 : ABSOLUTE OR INVERT VALUE OPERATION (2CH)



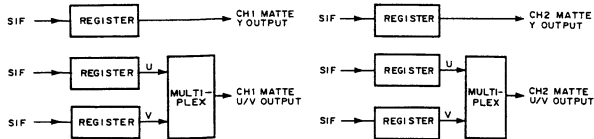
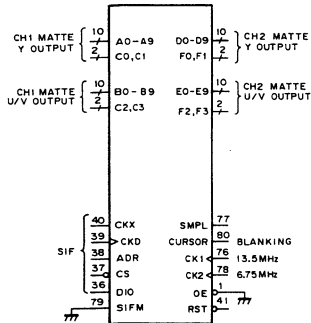
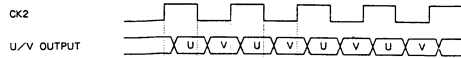
MODE 6 : D2 MATTE GENERATOR (2CH)



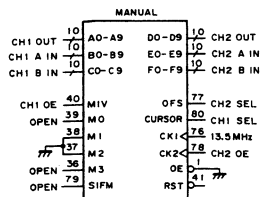
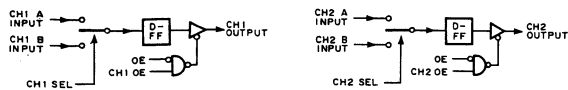
MODE 7 : WIPE/MIX TRANSITION CONTROLLER (3CH OUTPUTS)



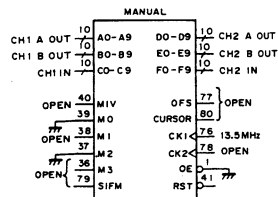
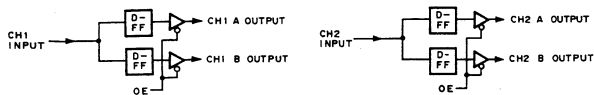
MODE 8: D1 MATTE GENERATOR (2CH)



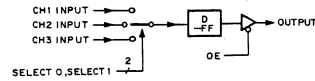
MODE 9: 1 OF 2 SELECTOR (2CH)



MODE 10: 1 TO 2 DISTRIBUTER (2CH)

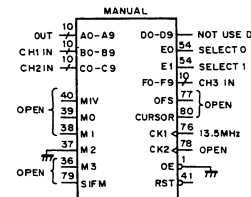


MODE 11: 1 OF 3 SELECTOR

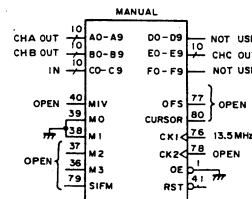
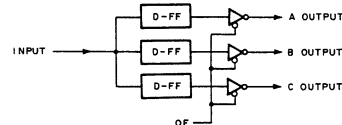


SELECT 1	SELECT 0	OUTPUT
0	0	CH1
0	1	CH2
1	0	CH3
1	1	0 OUT

0: LOW LEVEL
1: HIGH LEVEL



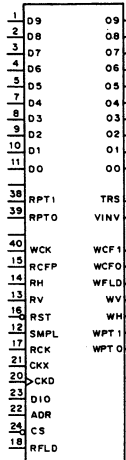
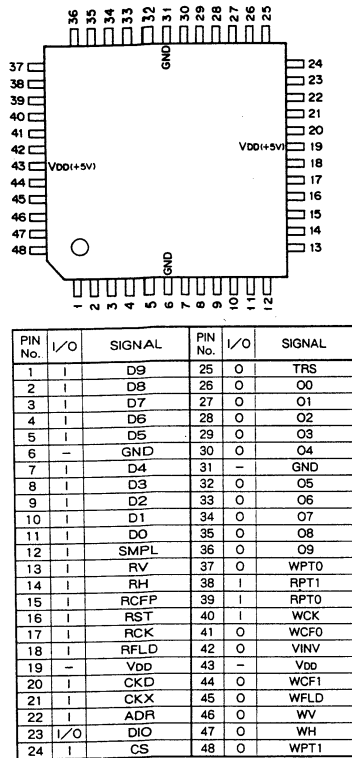
MODE 12: 1 TO 3 DISTRIBUTER



CXD8199Q (SONY) FLAT PACKAGE

CMOS TBC CONTROL

- TOP VIEW -



INPUT

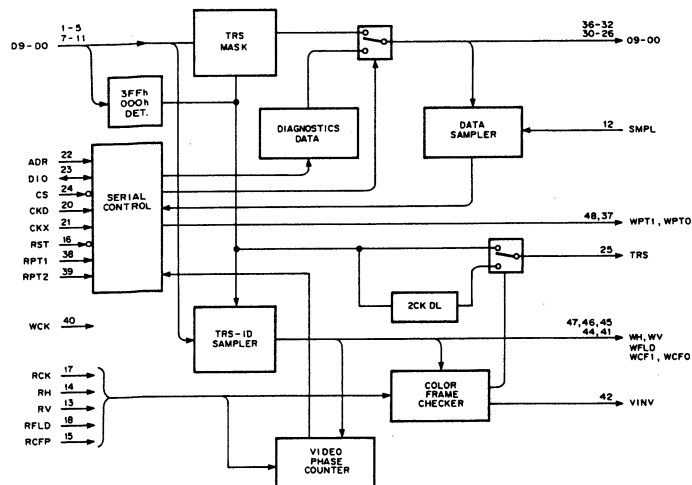
ADR : SERIAL ADDRESS
 CKD : SERIAL INTERFACE CLOCK
 CKX : SWITCHING TIMING PULSE
 CS : CHIP SELECT
 D0 - D9 : DATA IN
 RCFP : REF. COLOR FRAME PULSE
 RCK : READ CLOCK
 RFLD : REF. FIELD
 RH : REF. HD
 RPT0, RPT1 : READ PORT 0, 1
 RST : RESET
 RV : REF. VD
 SMPL : SAMPLE PULSE
 WCK : WRITE CLOCK

OUTPUT

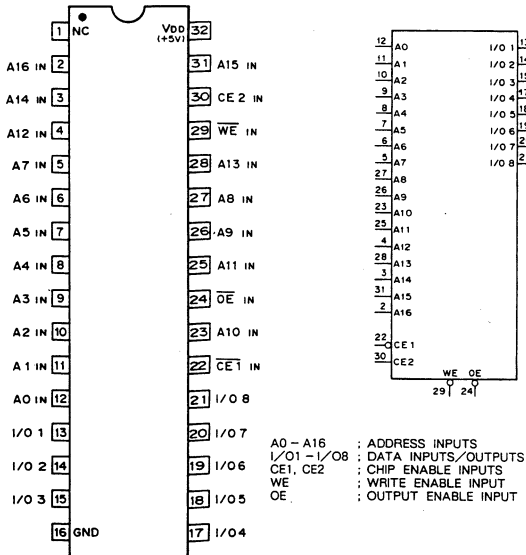
O0 - O9 : DATA OUT
 TRS : TIMING REF. SIGNAL
 VINV : V AXIS INVERT SIGNAL
 WCF0, WCF1 : WRITE COLOR FRAME 0, 1
 WFLD : WRITE FIELD
 WH : WRITE HD
 WPT0, WPT1 : WRITE PORT 0, 1
 WV : WRITE VD

INPUT/OUTPUT

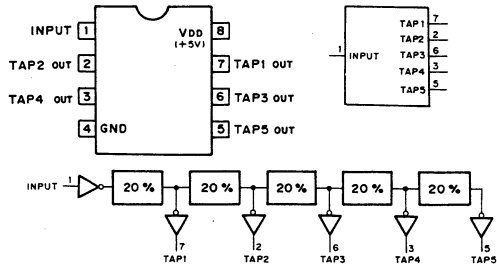
DIO : SERIAL DATA



CXK581001M-70L (SONY) FLAT PACKAGE
C-MOS 1M (131072x8)-BIT STATIC RAM
- TOP VIEW -



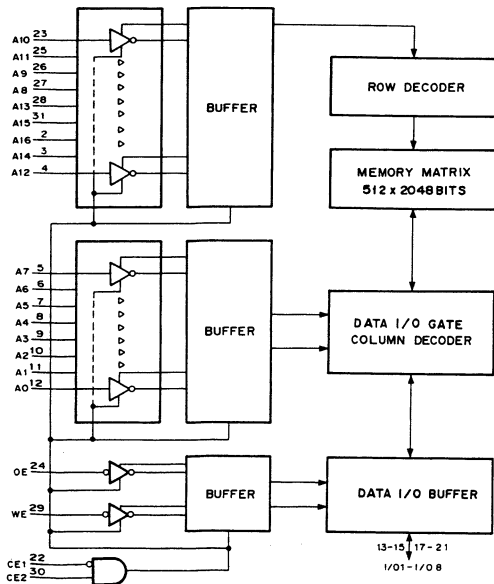
DS1000M-50 (DALLAS SEMICONDUCTOR) (DELAY TIME = 50ns)
C-MOS DELAY LINE
- TOP VIEW -



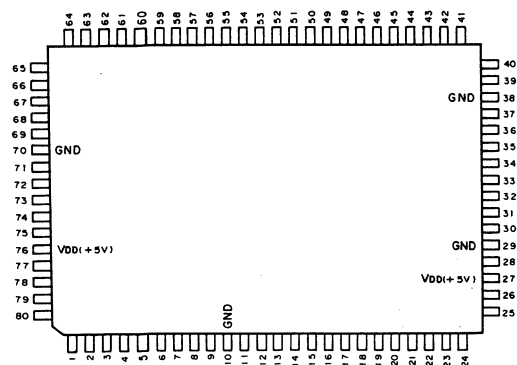
TYPE. NO.	DELAY TIME (ns)				
	TAP1	TAP2	TAP3	TAP4	TAP5
DS1000M-50	10	20	30	40	50
DS1000M-60	12	24	36	48	60
DS1000M-75	15	30	45	60	75
DS1000M-100	20	40	60	80	100
DS1000M-125	25	50	75	100	125
DS1000M-150	30	60	90	120	150
DS1000M-175	35	70	105	140	175
DS1000M-200	40	80	120	160	200
DS1000M-250	50	100	150	200	250
DS1000M-500	100	200	300	400	500

CE1	CE2	OE	WE	MODE
1	X	X	X	STANDBY
X	0	X	X	DISABLE
0	1	1	1	READ
0	1	0	1	WRITE

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE



HD647180X (HITACHI) FLAT PACKAGE
C-MOS 8-BIT MICRO PROCESSING UNIT
- TOP VIEW -



PIN No.	MODE 0		MODE 1		MODE 2		PROM MODE	
	I/O	SIGNAL	I/O	SIGNAL	I/O	SIGNAL	I/O	SIGNAL
1	I	NMI	I	NMI	I	NMI	O	A9
2	I	INT0	I	INT0	I	INT0	-	NC
3	I	INT1	I	INT1	I	INT1	-	NC
4	I	INT2	I	INT2	I	INT2	-	NC
5	I/O	PE4	O	ST	O	ST	-	NC
6	I/O	PC0	O	A0	O	A0	O	A0
7	I/O	PC1	O	A1	O	A1	O	A1
8	I/O	PC2	O	A2	O	A2	O	A2
9	I/O	PC3	O	A3	O	A3	O	A3
10	-	GND	-	GND	-	GND	-	GND
11	I/O	PC4	O	A4	O	A4	O	A4
12	I/O	PC5	O	A5	O	A5	O	A5
13	I/O	PC6	O	A6	O	A6	O	A6
14	I/O	PC7	O	A7	O	A7	O	A7
15	I/O	PD0	O	A8	I/O	A8/PD0	O	A8
16	I/O	PD1	O	A9	I/O	A9/PD1	-	NC
17	I/O	PD2	O	A10	I/O	A10/PD2	O	A10
18	I/O	PD3	O	A11	I/O	A11/PD3	O	A11
19	I/O	PD4	O	A12	I/O	A12/PD4	O	A12
20	I/O	PD5	O	A13	I/O	A13/PD5	O	A13
21	I/O	PD6	O	A14	I/O	A14/PD6	O	A14
22	I/O	PD7	O	A15	I/O	A15/PD7	I	OE
23	I/O	PE0	O	A16	I/O	A16/PE0	I	CE
24	I/O	PE1	O	A17	I/O	A17/PE1	-	NC
25	I/O	PE2	O	A18	I/O	A18/PE2	-	NC
26	O	TOUT1	O	TOUT1	O	TOUT1	-	NC
27	-	VDD	-	VDD	-	VDD	-	VDD
28	I/O	PE3	O	A19	I/O	A19/PE3	-	NC
29	-	GND	-	GND	-	GND	-	GND
30	I/O	PF0	I/O	D0	I/O	D0	O	O0
31	I/O	PF1	I/O	D1	I/O	D1	O	O1
32	I/O	PF2	I/O	D2	I/O	D2	O	O2
33	I/O	PF3	I/O	D3	I/O	D3	O	O3
34	I/O	PF4	I/O	D4	I/O	D4	O	O4
35	I/O	PF5	I/O	D5	I/O	D5	O	O5
36	I/O	PF6	I/O	D6	I/O	D6	O	O6
37	I/O	PF7	I/O	D7	I/O	D7	O	O7
38	-	GND	-	GND	-	GND	-	GND
39	I	PG0/AN0	I	PG0/AN0	I	PG0/AN0	-	NC
40	I	PG1/AN1	I	PG1/AN1	I	PG1/AN1	-	NC

PIN No.	MODE 0		MODE 1		MODE 2		PROM MODE	
	I/O	SIGNAL	I/O	SIGNAL	I/O	SIGNAL	I/O	SIGNAL
41	I	PG2/AN2	I	PG2/AN2	I	PG2/AN2	-	NC
42	I	PG3/AN3	I	PG3/AN3	I	PG3/AN3	-	NC
43	I	PG4/AN4	I	PG4/AN4	I	PG4/AN4	-	NC
44	I	PG5/AN5	I	PG5/AN5	I	PG5/AN5	-	NC
45	O	RTS0	O	RTS0	O	RTS0	-	NC
46	I	CTS0	I	CTS0	I	CTS0	-	NC
47	I	DCD0	I	DCD0	I	DCD0	-	NC
48	O	TXA0	O	TXA0	O	TXA0	-	NC
49	I	RXA0	I	RXA0	I	RXA0	-	NC
50	I/O	CKA0/DREQ0	I/O	CKA0/DREQ0	I/O	CKA0/DREQ0	-	NC
51	O	TOUT2	O	TOUT2	O	TOUT2	-	NC
52	O	TOUT3	O	TOUT3	O	TOUT3	-	NC
53	I	IC	I	IC	I	IC	-	NC
54	I/O	TXA1/PA0	I/O	TXA1/PA0	I/O	TXA1/PA0	-	NC
55	I/O	RXA1/PA1	I/O	RXA1/PA1	I/O	RXA1/PA1	-	NC
56	I/O	CKA1/TEND0/PA2	I/O	CKA1/TEND0/PA2	I/O	CKA1/TEND0/PA2	-	NC
57	I/O	TXS/PA3	I/O	TXS/PA3	I/O	TXS/PA3	-	NC
58	I/O	RXS/CTS1/PA4	I/O	RXS/CTS1/PA4	I/O	RXS/CTS1/PA4	-	NC
59	I/O	CKS/PA5	I/O	CKS/PA5	I/O	CKS/PA5	-	NC
60	I/O	DREQ1/PA6	I/O	DREQ1/PA6	I/O	DREQ1/PA6	-	NC
61	I/O	TEND1/PA7	I/O	TEND1/PA7	I/O	TEND1/PA7	-	NC
62	I/O	PB7	O	HALT	O	HALT	-	NC
63	I/O	PB6	O	REF	O	REF	-	NC
64	I/O	PB5	O	IOE	O	IOE	-	NC
65	I/O	PB4	O	ME	O	ME	-	NC
66	I/O	PB3	O	E	O	E	-	NC
67	I/O	PB2	O	LIR	O	LIR	-	NC
68	I/O	PB1	O	WR	O	WR	-	NC
69	I/O	PB0	O	RD	O	RD	-	NC
70	-	GND	-	GND	-	GND	-	GND
71	O	φ	O	φ	O	φ	-	NC
72	I	MP1	I	MP1	I	MP1	I	MP1
73	I	MP0	I	MP0	I	MP0	I	MP0
74	I	XTAL	I	XTAL	I	XTAL	I	XTAL
75	I	EXTAL	I	EXTAL	I	EXTAL	I	EXTAL
76	-	VDD	-	VDD	-	VDD	-	VDD
77	I/O	PE7	I	WAIT	I	WAIT	-	NC
78	I/O	PES	O	BUSACK	O	BUSACK	-	NC
79	I/O	PES	I	BUSREQ	I	BUSREQ	-	NC
80	I	RESET	I	RESET	I	RESET	-	VPP

MODE 0			MODE 1			MODE 2			PROM MODE		
54	TAX1/PA0	PC0	6	54	TAX1/PA0	A0	6	22	OE	A0	6
55	RXA1/PA1	PC1	7	55	RXA1/PA1	A1	7	23	CE	A1	7
56	CKA1/TEND0/PA2	PC2	8	56	CKA1/TEND0/PA2	A2	8	72	MP1	A2	8
57	TXS/PA3	PC3	9	57	TXS/PA3	A3	9	73	MPO	A3	9
58	RXS/CTS1/PA4	PC4	11	58	RXS/CTS1/PA4	A4	11	74	XTAL	A4	11
59	CKS/PA5	PC5	12	59	CKS/PA5	A5	12	75	EXTAL	A5	12
60	DREQ1/PA6	PC6	13	60	DREQ1/PA6	A6	13				
61	TEND1/PA7	PC7	14	61	TEND1/PA7	A7	14				
69	PB0	PD0	15	30	D0	A8/PD0	15				
68	PB1	PD1	16	31	D1	A9/PD1	16				
67	PB2	PD2	17	32	D2	A10/PD2	17				
66	PB3	PD3	18	33	D3	A11/PD3	18				
65	PB4	PD4	19	34	D4	A12/PD4	19				
64	PB5	PD5	20	35	D5	A13/PD5	20				
63	PB6	PD6	21	36	D6	A14/PD6	21				
62	PB7	PD7	22	37	D7	A15/PD7	22				
39	PG0/ANO	PE0	23	39	PG0/ANO	A16/PE0	23				
40	PG1/AN1	PE1	24	40	PG1/AN1	A17/PE1	24				
41	PG2/AN2	PE2	25	41	PG2/AN2	A18/PE2	25				
42	PG3/AN3	PE3	28	42	PG3/AN3	A19/PE3	28				
43	PG4/AN4	PE4	5	43	PG4/AN4	ST	5				
44	PG5/AN5	PE5	79	44	PG5/AN5	ST	79				
1	NMI	PE6	77	1	NMI	BUSACK	78				
2	INT0	PF0	30	2	INT0	HALT	62				
3	INT1	PF1	31	3	INT1	REF	63				
4	INT2	PF2	32	4	INT2	IOE	64				
73	MPO	PF3	33	73	MPO	ME	65				
72	MP1	PF4	34	72	MP1	E	66				
74	XTAL	PF5	35	74	XTAL	LIR	67				
75	EXTAL	PF6	36	75	EXTAL	WR	68				
80	RESET	PF7	37	80	RESET	RD	69				
46	CTS0			46	CTS0						
47	DCD0	TOUT1	26	47	DCD0	TOUT1	26				
48	RXA0	TOUT2	51	48	RXA0	TOUT2	51				
53	IC	TOUT3	52	53	IC	TOUT3	52				
50	CKA0/DREQ0	RTS0	45	50	CKA0/DREQ0	RTS0	45				
		TXA0	48			TXA0	48				
			71				71				

INPUT

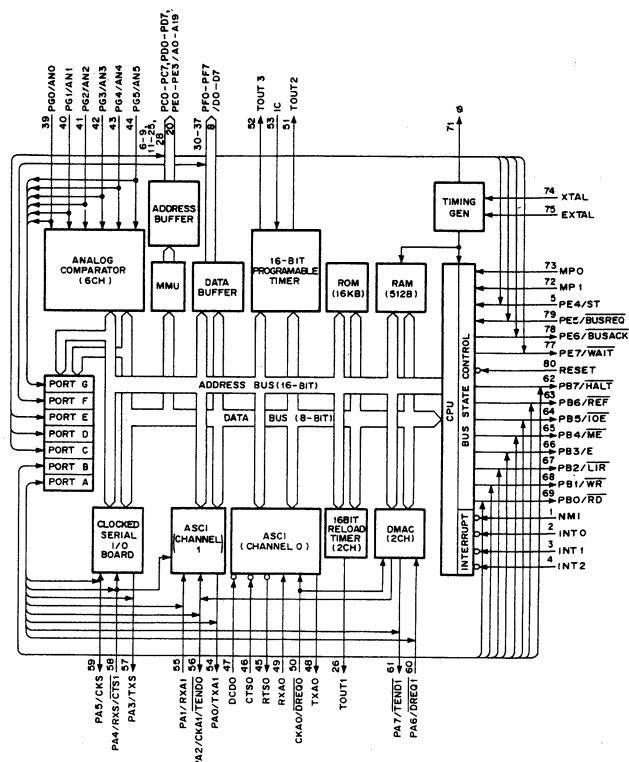
AN0—AN5 : ANALOG INPUT
 BUSREQ : BUS REQUEST
 CTS0, 1 : CLEAR TO SEND FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
 DCD0, 1 : DATA CARRIER DETECT FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
 DREQ0, 1 : DMA REQUEST FOR CHANNEL n (n=0 OR 1)
 EXTAL : EXTERNAL CLOCK
 IC : INPUT CAPTURE
 INT0—2 : INTERRUPT
 MPO, 1 : MOD PROGRAM
 NMI : NON-MASKABLE INTERRUPT
 PG0—PG5 : 8-BIT INPUT OF PORT G
 RXA0, 1 : RECEIVE DATA FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
 RXS : RECEIVE DATA FOR SERIAL I/O PORT
 XTAL : CLOCK

OUTPUT

A0—A19 : ADDRESS BUS
 BUSACK : BUS ACKNOWLEDGE
 E : EABLE
 IOE : I/O ENABLE
 LIR : LOAD INSTRUCTION REGISTER
 ME : MEMORY ENABLE
 RD : READ
 REF : REFRESH
 RTS0, 1 : REQUEST TO SEND FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
 ST : STATUS
 TEND0, 1 : TRANSFER END FOR CHANNEL n (n=0 OR 1)
 TOUT1—3 : TIMER OUT
 TXA0, 1 : TRANSFER DATA FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
 TXS : TRANSFER DATA FOR SERIAL I/O PORT
 WR : WRITE
 Φ : SYSTEM CLOCK

INPUT/OUTPUT

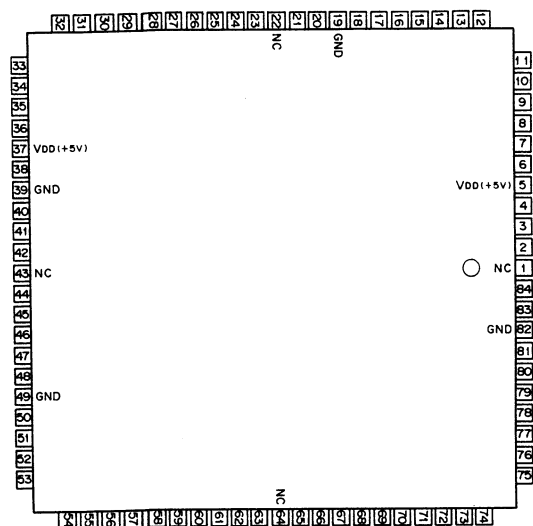
CKA0, 1 : CLOCK FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
 CKS : CLOCK FOR SERIAL I/O PORT
 D0—D7 : DATA BUS
 PA0—PA7 : 8-BIT INPUT/OUTPUT OF PORT A
 PB0—PB7 : 8-BIT INPUT/OUTPUT OF PORT B
 PC0—PC7 : 8-BIT INPUT/OUTPUT OF PORT C
 PD0—PD7 : 8-BIT INPUT/OUTPUT OF PORT D
 PE0—PE7 : 8-BIT INPUT/OUTPUT OF PORT E
 PF0—PF7 : 8-BIT INPUT/OUTPUT OF PORT F



HD647180XOCP6 (HITACHI)

C-MOS 8-BIT MICRO PROCESSING UNIT

- TOP VIEW -



PIN No.	MODE 0		MODE 1		MODE 2		PROM MODE	
	I/O	SIGNAL	I/O	SIGNAL	I/O	SIGNAL	I/O	SIGNAL
1	—	NC	—	NC	—	NC	—	NC
2	I	MP0	I	MP0	I	MP0	I	MP0
3	I	XTAL	I	XTAL	I	XTAL	I	XTAL
4	I	EXTAL	I	EXTAL	I	EXTAL	I	EXTAL
5	—	VDD	—	VDD	—	VDD	—	VDD
6	I/O	PE7	I	WAIT	I	WAIT	—	NC
7	I/O	PE6	O	BUSACK	O	BUSACK	—	NC
8	I/O	PE5	I	BUSREQ	I	BUSREQ	—	NC
9	I	RESET	I	RESET	I	RESET	—	VPP
10	I	NMI	I	NMI	I	NMI	O	A9
11	I	INT0	I	INT0	I	INT0	—	NC
12	I	INT1	I	INT1	I	INT1	—	NC
13	I	INT2	I	INT2	I	INT2	—	NC
14	I/O	PE4	O	ST	O	ST	—	NC
15	I/O	PC0	O	A0	O	A0	O	A0
16	I/O	PC1	O	A1	O	A1	O	A1
17	I/O	PC2	O	A2	O	A2	O	A2
18	I/O	PC3	O	A3	O	A3	O	A3
19	—	GND	—	GND	—	GND	—	GND
20	I/O	PC4	O	A4	O	A4	O	A4
21	I/O	PC5	O	A5	O	A5	O	A5
22	—	NC	—	NC	—	NC	—	NC
23	I/O	PC6	O	A6	O	A6	O	A6
24	I/O	PC7	O	A7	O	A7	O	A7
25	I/O	PD0	O	A8	I/O	A8/PD0	O	A8
26	I/O	PD1	O	A9	I/O	A9/PD1	—	NC
27	I/O	PD2	O	A10	I/O	A10/PD2	O	A10
28	I/O	PD3	O	A11	I/O	A11/PD3	O	A11
29	I/O	PD4	O	A12	I/O	A12/PD4	O	A12
30	I/O	PD5	O	A13	I/O	A13/PD5	O	A13
31	I/O	PD6	O	A14	I/O	A14/PD6	O	A14
32	I/O	PD7	O	A15	I/O	A15/PD7	I	OE
33	I/O	PE0	O	A16	I/O	A16/PE0	I	CE
34	I/O	PE1	O	A17	I/O	A17/PE1	—	NC
35	I/O	PE2	O	A18	I/O	A18/PE2	—	NC
36	O	TOUT1	O	TOUT1	O	TOUT1	—	NC
37	—	VDD	—	VDD	—	VDD	—	VDD
38	I/O	PE3	O	A19	I/O	A19/PE3	—	NC
39	—	GND	—	GND	—	GND	—	GND
40	I/O	PF0	I/O	D0	I/O	D0	O	O0
41	I/O	PF1	I/O	D1	I/O	D1	O	O1
42	I/O	PF2	I/O	D2	I/O	D2	O	O2

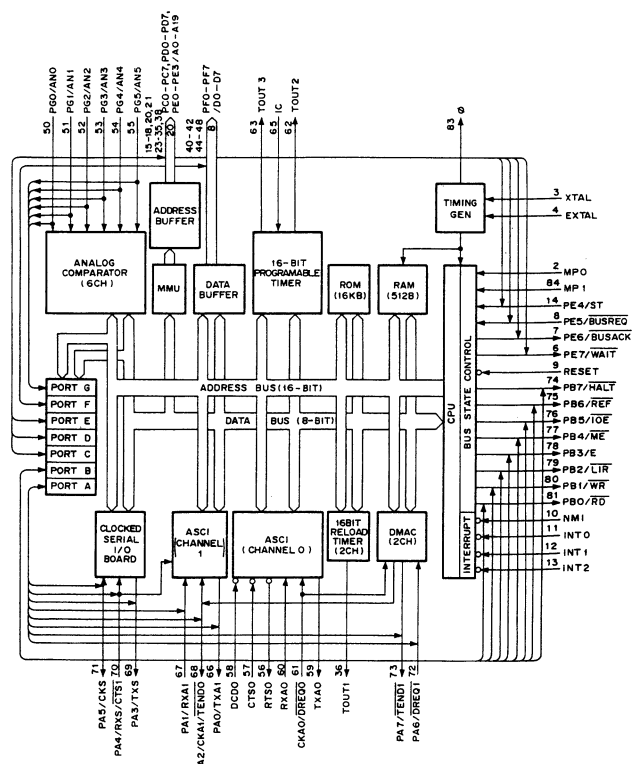
PIN No.	MODE 0		MODE 1		MODE 2		PROM MODE	
	I/O	SIGNAL	I/O	SIGNAL	I/O	SIGNAL	I/O	SIGNAL
43	—	NC	—	NC	—	NC	—	NC
44	I/O	PF3	I/O	D3	I/O	D3	O	O3
45	I/O	PF4	I/O	D4	I/O	D4	O	O4
46	I/O	PF5	I/O	D5	I/O	D5	O	O5
47	I/O	PF6	I/O	D6	I/O	D6	O	O6
48	I/O	PF7	I/O	D7	I/O	D7	O	O7
49	—	GND	—	GND	—	GND	—	GND
50	I	PG0/AN0	I	PG0/AN0	I	PG0/AN0	—	NC
51	I	PG1/AN1	I	PG1/AN1	I	PG1/AN1	—	NC
52	I	PG2/AN2	I	PG2/AN2	I	PG2/AN2	—	NC
53	I	PG3/AN3	I	PG3/AN3	I	PG3/AN3	—	NC
54	I	PG4/AN4	I	PG4/AN4	I	PG4/AN4	—	NC
55	I	PG5/AN5	I	PG5/AN5	I	PG5/AN5	—	NC
56	O	RTS0	O	RTS0	O	RTS0	—	NC
57	I	CTS0	I	CTS0	I	CTS0	—	NC
58	I	DCD0	I	DCD0	I	DCD0	—	NC
59	O	TXA0	O	TXA0	O	TXA0	—	NC
60	I	RXA0	I	RXA0	I	RXA0	—	NC
61	I/O	CKA0/DREQ0	I/O	CKA0/DREQ0	I/O	CKA0/DREQ0	—	NC
62	O	TOUT2	O	TOUT2	O	TOUT2	—	NC
63	O	TOUT3	O	TOUT3	O	TOUT3	—	NC
64	—	NC	—	NC	—	NC	—	NC
65	I	IC	I	IC	I	IC	—	NC
66	I/O	TXA1/PA0	I/O	TXA1/PA0	I/O	TXA1/PA0	—	NC
67	I/O	RXA1/PA1	I/O	RXA1/PA1	I/O	RXA1/PA1	—	NC
68	I/O	CKA1/TEND0/PA2	I/O	CKA1/TEND0/PA2	I/O	CKA1/TEND0/PA2	—	NC
69	I/O	TXS/PA3	I/O	TXS/PA3	I/O	TXS/PA3	—	NC
70	I/O	RXS/CTS1/PA4	I/O	RXS/CTS1/PA4	I/O	RXS/CTS1/PA4	—	NC
71	O	CKS/PA5	I/O	CKS/PA5	I/O	CKS/PA5	—	NC
72	I/O	DREQ1/PA6	I/O	DREQ1/PA6	I/O	DREQ1/PA6	—	NC
73	I/O	TEND1/PA7	I/O	TEND1/PA7	I/O	TEND1/PA7	—	NC
74	I/O	PB7	O	HALT	O	HALT	—	NC
75	I/O	PB6	O	REF	O	REF	—	NC
76	I/O	PB5	O	IOE	O	IOE	—	NC
77	I/O	PB4	O	ME	O	ME	—	NC
78	I/O	PB3	O	E	O	E	—	NC
79	I/O	PB2	O	LIR	O	LIR	—	NC
80	I/O	PB1	O	WR	O	WR	—	NC
81	I/O	PB0	O	RD	O	RD	—	NC
82	—	GND	—	GND	—	GND	—	GND
83	O	φ	O	φ	O	φ	—	NC
84	I	MP1	I	MP1	I	MP1	I	MP1

MODE 0			MODE 1			MODE 2			FROM MODE		
66	TAX1/PA0	PC0 15	66	TAX1/PA0	A0 15	66	TAX1/PA0	A0 15	32	OE	A0 15
67	RXA1/PA1	PC1 16	67	RXA1/PA1	A1 16	67	RXA1/PA1	A1 16	33	CE	A1 16
68	CKA1/TEND0/PA2	PC2 17	68	CKA1/TEND0/PA2	A2 17	68	CKA1/TEND0/PA2	A2 17	84	MP1	A2 17
69	TXS/PA3	PC3 18	69	TXS/PA3	A3 18	69	TXS/PA3	A3 18	2	MPO	A3 18
70	RXS/CTS1/PA4	PC4 20	70	RXS/CTS1/PA4	A4 20	70	RXS/CTS1/PA4	A4 20	3	XTAL	A4 20
71	CKS/PA5	PC5 21	71	CKS/PA5	A5 21	71	CKS/PA5	A5 21	4	EXTAL	A5 21
72	DREG1/PA6	PC6 23	72	DREG1/PA6	A6 23	72	DREG1/PA6	A6 23			A6 23
73	TEND1/PA7	PC7 24	73	TEND1/PA7	A7 24	73	TEND1/PA7	A7 24			A7 24
81	PB0	PD0 25	40	D0	A8 25	40	D0	A8 / PD0 25			A8 25
80	PB1	PD1 26	41	D1	A9 26	41	D1	A9 / PD1 26			A9 26
79	PB2	PD2 27	42	D2	A10 27	42	D2	A10 / PD2 27			A10 27
78	PB3	PD3 28	43	D3	A11 28	43	D3	A11 / PD3 28			A11 28
77	PB4	PD4 29	44	D4	A12 29	44	D4	A12 / PD4 29			A12 29
76	PB5	PD5 30	45	D5	A13 30	45	D5	A13 / PD5 30			A13 30
75	PB6	PD6 31	46	D6	A14 31	46	D6	A14 / PD6 31			A14 31
74	PB7	PD7 32	47	D7	A15 32	47	D7	A15 / PD7 32			A15 32
50	PG0 / AN0	PE0 33	50	PG0 / AN0	A16 33	50	PG0 / AN0	A16 / PE0 33			A16 33
51	PG1 / AN1	PE1 34	51	PG1 / AN1	A17 34	51	PG1 / AN1	A17 / PE1 34			A17 34
52	PG2 / AN2	PE2 35	52	PG2 / AN2	A18 35	52	PG2 / AN2	A18 / PE2 35			A18 35
53	PG3 / AN3	PE3 36	53	PG3 / AN3	A19 36	53	PG3 / AN3	A19 / PE3 36			A19 36
54	PG4 / AN4	PE4 37	54	PG4 / AN4	ST 14	54	PG4 / AN4	ST 14			A14 31
55	PG5 / AN5	PE5 38	55	PG5 / AN5	ST 14	55	PG5 / AN5	ST 14			A14 31
10	NMI	PF7 6	10	NMI	BUSACK 7	10	NMI	BUSACK 7			00 41
11	INT0		11	INT0		11	INT0				01 42
12	INT1	PF0 40	12	INT1	HALT 74	12	INT1	HALT 74			02 43
13	INT2	PF1 41	13	INT2	REF 75	13	INT2	REF 75			03 44
2	MPO	PF2 42	2	MPO	IOE 76	2	MPO	IOE 76			04 45
84	MP1	PF3 44	84	MP1	ME 77	84	MP1	ME 77			05 46
3	XTAL	PF4 45	3	XTAL	E 78	3	XTAL	E 78			06 47
4	EXTAL	PF5 46	4	EXTAL	LIR 79	4	EXTAL	LIR 79			07 48
9	RESET	PF6 47	9	RESET	WR 80	9	RESET	WR 80			
37	CTS0	PF7 48	37	CTS0	RD 81	37	CTS0	RD 81			
58	DCD0	TOUT1 36	58	DCD0	TOUT1 36	58	DCD0	TOUT1 36			
60	RXA0	TOUT2 62	60	RXA0	TOUT2 62	60	RXA0	TOUT2 62			
63	IC	TOUT3 63	63	IC	TOUT3 63	63	IC	TOUT3 63			
61	CKA0/DREG0	RTS0 56	61	CKA0/DREG0	RTS0 56	61	CKA0/DREG0	RTS0 56			
62	TXA0	TXA0 59	62	TXA0	TXA0 59	62	TXA0	TXA0 59			
63	BUSACK	83	63	BUSACK	83	63	BUSACK	83			

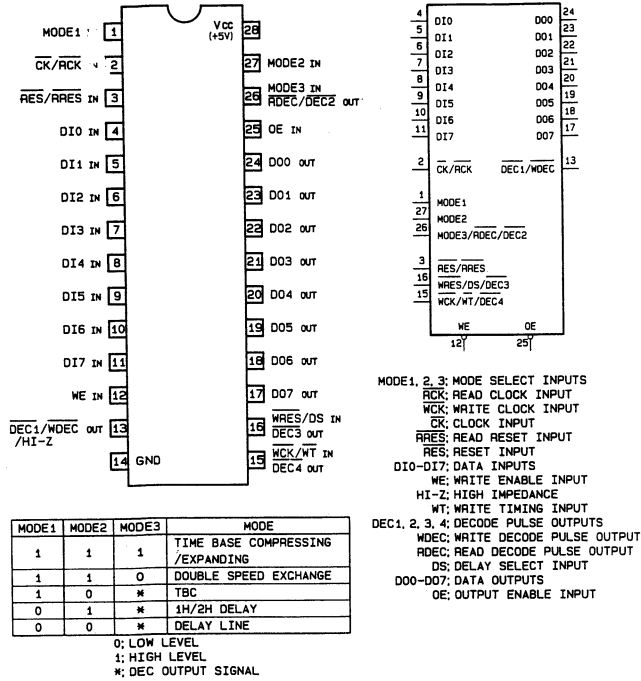
INPUT
 AN0 — AN5 : ANALOG INPUT
 BUSREQ : BUS REQUEST
 CTS0, 1 : CLEAR TO SEND FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
 DCD0, 1 : DATA CARRIER DETECT FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
 DREG0, 1 : DMA REQUEST FOR CHANNEL n (n=0 OR 1)
 EXTAL : EXTERNAL CLOCK
 IC : INPUT CAPTURE
 INTO — 2 : INTERRUPT
 MPO, 1 : MOD PROGRAM
 NMI : NON-MASKABLE INTERRUPT
 PG0 — PG5 : 6-BIT INPUT OF PORT G
 RXA0, 1 : RECEIVE DATA FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
 RXS : RECEIVE DATA FOR SERIAL I/O PORT
 XTAL : CLOCK

OUTPUT
 A0 — A19 : ADDRESS BUS
 BUSACK : BUS ACKNOWLEDGE
 E : ENABLE
 IOE : I/O ENABLE
 LIR : LOAD INSTRUCTION REGISTER
 ME : MEMORY ENABLE
 RD : READ
 REF : REFRESH
 RTS0, 1 : REQUEST TO SEND FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
 ST : STATUS
 TEND0, 1 : TRANSFER END FOR CHANNEL n (n=0 OR 1)
 TOUT1 — 3 : TIMER OUT
 TXA0, 1 : TRANSFER DATA FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
 TXS : TRANSFER DATA FOR SERIAL I/O PORT
 WR : WRITE
 φ : SYSTEM CLOCK

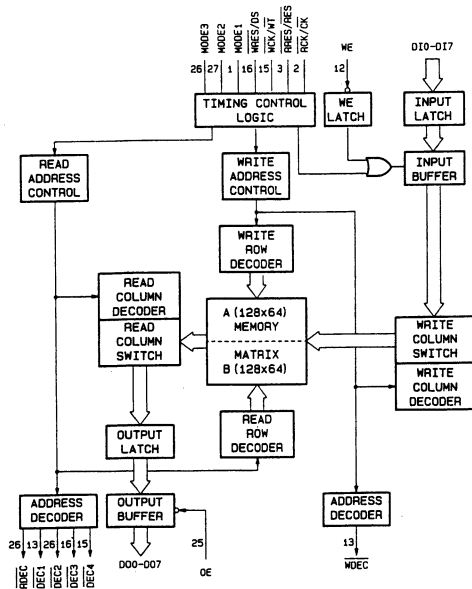
INPUT/OUTPUT
 CKA0, 1 : CLOCK FOR ASYNCHRONOUS SCI CHANNEL n (n=0 OR 1)
 CKS : CLOCK FOR SERIAL I/O PORT
 D0 — D7 : DATA BUS
 PA0 — PA7 : 8-BIT INPUT/OUTPUT OF PORT A
 PB0 — PB7 : 8-BIT INPUT/OUTPUT OF PORT B
 PC0 — PC7 : 8-BIT INPUT/OUTPUT OF PORT C
 PD0 — PD7 : 8-BIT INPUT/OUTPUT OF PORT D
 PE0 — PE7 : 8-BIT INPUT/OUTPUT OF PORT E
 PF0 — PF7 : 8-BIT INPUT/OUTPUT OF PORT F



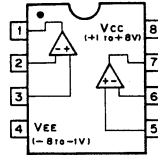
HM63021FP-28 (HITACHI) FLAT PACKAGE
HM63021P-28 (HITACHI)
2048 WORDx8-BIT LINE MEMORY
- TOP VIEW -



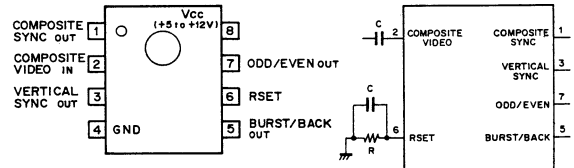
PIN NO.	MODE				
	TIME BASE COMPRESSING /EXPANDING	DOUBLE SPEED EXCHANGE	TBC	1H/2H DELAY	DELAY LINE
1	MODE1				
2	RCK			CK	
3	RRES			RES	
4-11	DIO-D17				
12	WE				
13	HI-Z		WDEC		DEC1
15	WCK		WT		DEC4
16	WRES		DS		DEC3
17-24	D00-D07				
25	OE				
26	MODE3		RDEC		DEC2
27	MODE2				



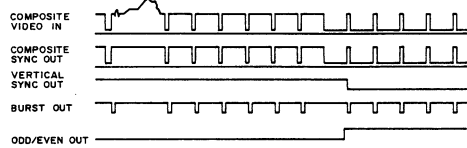
ICL7621BCSA (MAXIM) FLAT PACKAGE
CMOS DUAL OPERATIONAL AMPLIFIER
- TOP VIEW -



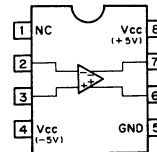
LM1881M (NS) FLAT PACKAGE
VIDEO SYNC SEPARATOR
- TOP VIEW -



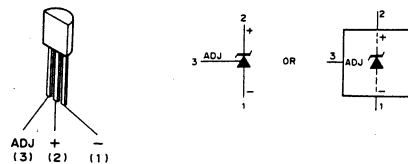
TIMING CHART



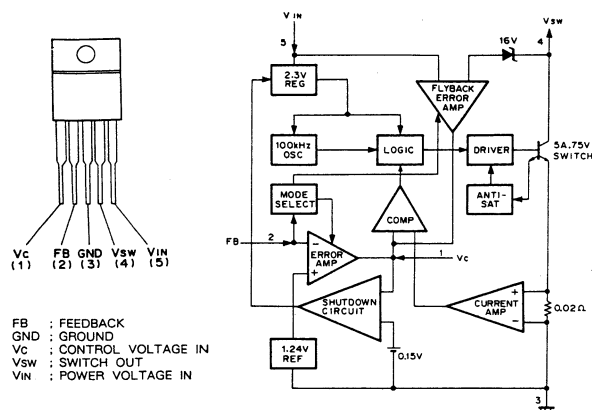
LM360M (NS) FLAT PACKAGE
HIGH SPEED VOLTAGE COMPARATOR
(TTL OUTPUT)
- TOP VIEW -



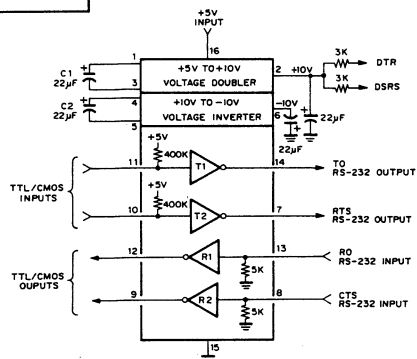
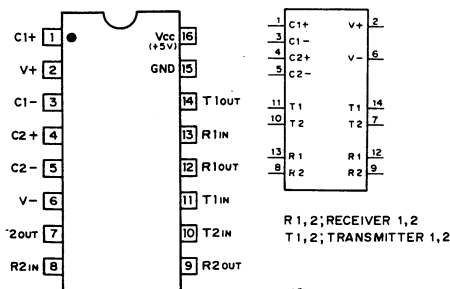
LT1009CZ (LINEAR TECHNOLOGY)
VOLTAGE REFERENCE



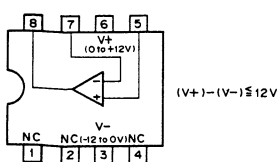
LT1171CT (LINEAR TECHNOLOGY)
SWITCHING REGULATORS (100kHz)
- SIDE VIEW -



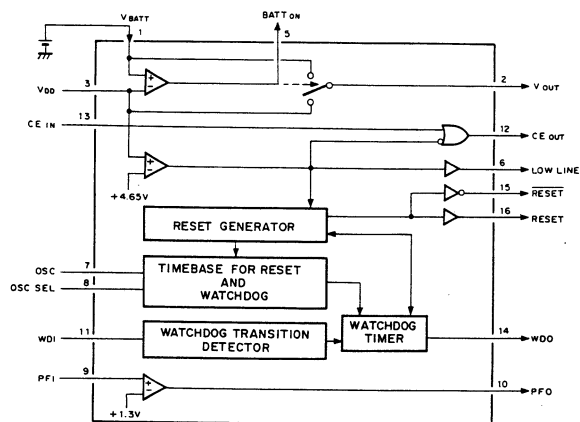
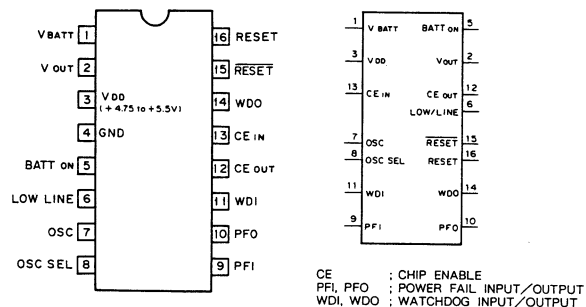
MAX232CPE (MAXIM)
RS-232 TRANSMITTER/RECEIVER
- TOP VIEW -



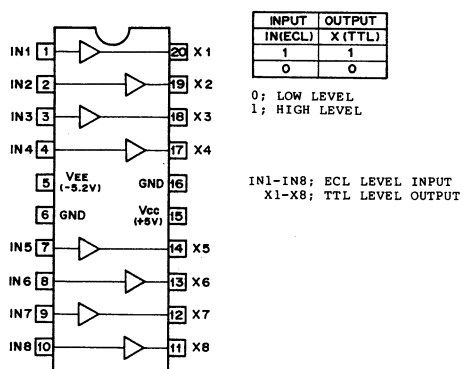
MAX452CSA (MAXIM) FLAT PACKAGE
C-MOS 50MHz VIDEO AMPLIFIER
- TOP VIEW -



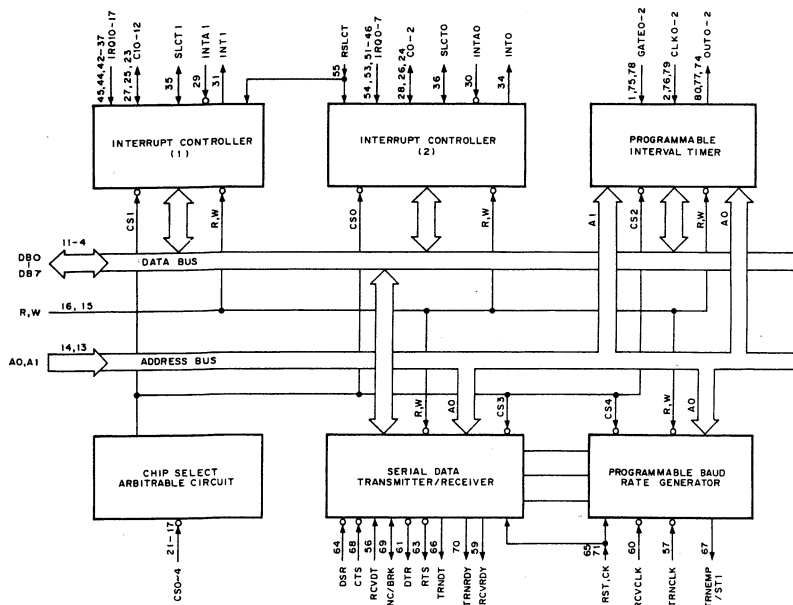
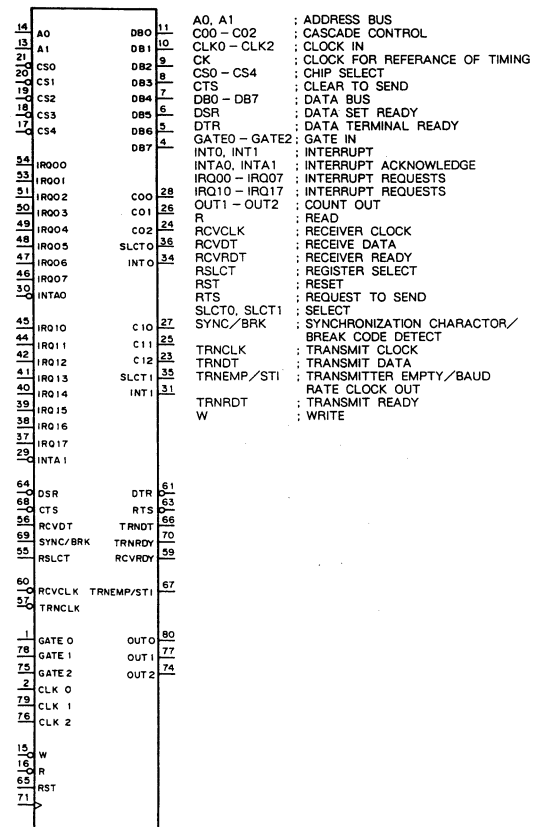
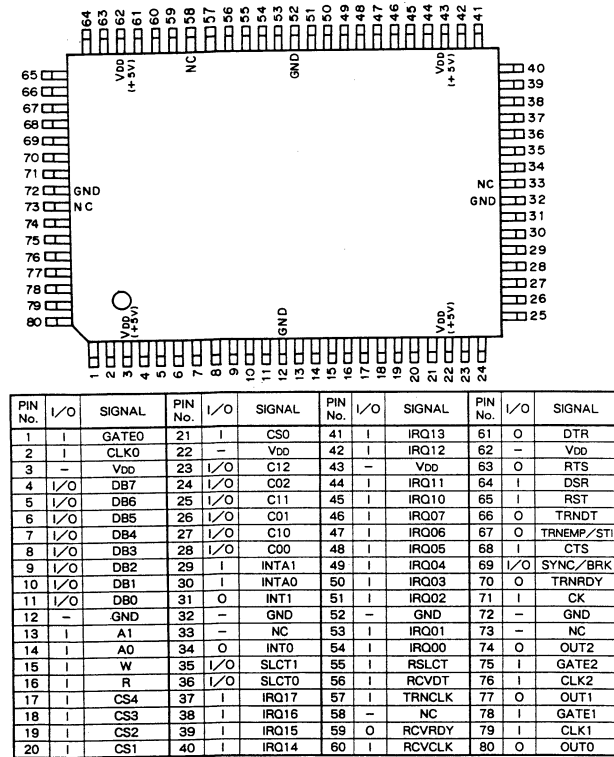
MAX691CPE (MAXIM)
C-MOS MICROPROCESSOR SUPERVISORY CIRCUITS
- TOP VIEW -



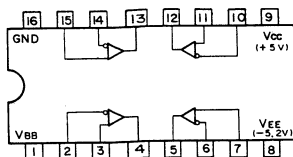
MB766P (FUJITSU)
OCTAL ECL TO TTL LEVEL TRANSLATOR
- TOP VIEW -



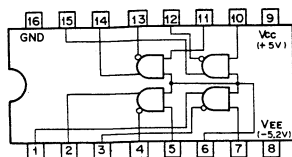
MB89394-PF (FUJITSU) FLAT PACKAGE
C-MOS ENCAPSULATED PERIPHERAL PROCESSOR
- TOP VIEW -



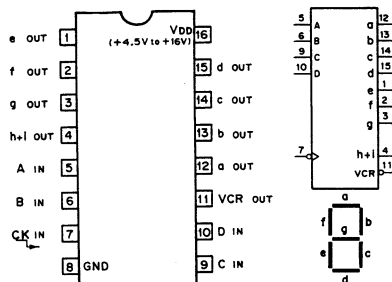
MC10125L (MOTOROLA)
MC10H125M (MOTOROLA) FLAT PACKAGE
ECL ECL-TO-TTL TRANSLATOR
- TOP VIEW -



MC10H124M (MOTOROLA) FLAT PACKAGE
ECL TTL-TO-ECL TRANSLATOR
- TOP VIEW -



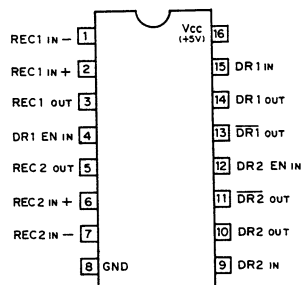
MC14495P1 (MOTOROLA)
CMOS BCD-TO-SEVEN-SEGMENT 4-BIT LATCH/DECODER DRIVER
- TOP VIEW -



INPUTS				OUTPUTS										DISPLAY
CK	D	C	B	A	a	b	c	d	e	f	g	h+	VCR	
0	0	0	0	0	1	1	1	1	1	0	0	0	Z	□
0	0	0	0	1	0	1	1	0	0	0	0	0	Z	□
0	0	0	1	0	1	1	0	1	1	0	1	0	Z	□
0	0	0	1	1	0	1	1	1	0	0	1	0	Z	□
0	0	1	0	0	0	1	1	0	0	1	1	0	Z	□
0	0	1	0	1	0	1	1	0	1	1	0	1	Z	□
0	0	1	1	0	0	1	1	1	0	0	0	0	Z	□
0	0	1	1	1	0	1	1	1	1	1	1	0	Z	□
0	1	0	0	0	1	1	1	1	1	1	1	0	Z	□
0	1	0	0	1	1	1	1	1	0	1	1	0	Z	□
0	1	0	1	0	1	1	1	0	1	1	1	1	Z	□
0	1	0	1	1	0	1	1	1	1	1	1	1	Z	□
0	1	1	0	0	1	1	1	0	0	1	1	0	Z	□
0	1	1	0	1	0	1	1	1	1	1	1	0	Z	□
0	1	1	1	0	1	0	0	1	1	1	1	1	Z	□
0	1	1	1	1	1	0	0	0	1	1	1	1	0	□
1	X	X	X	X	X	X	X	X	X	X	X	X	Z/O	DATA LATCH
1	X	X	X	X	X	X	X	X	X	X	X	X	Z/O	DATA HOLD

0: LOW LEVEL
1: HIGH LEVEL
X: DONT CARE
Z: HIGH IMPEDANCE

MC34051P (MOTOROLA)
RS-422 DRIVER/RECEIVER
- TOP VIEW -

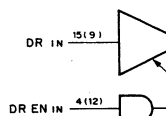


DR EN	MODE
0	DISABLE
1	ENABLE

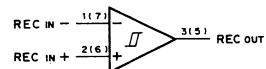
0: LOW LEVEL
1: HIGH LEVEL

DR: DRIVER
DR EN: DRIVER ENABLE
REC: RECEIVER

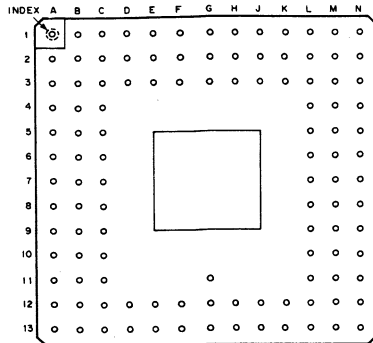
DRIVER CIRCUIT



RECEIVER CIRCUIT



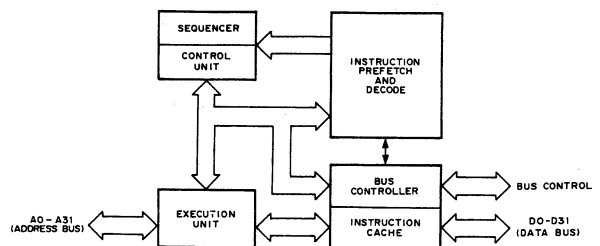
MC68020RC25 (MOTOROLA) (CLOCK FREQUENCY : 25MHz)
32-BIT MICROPROCESSOR
- BOTTOM VIEW -



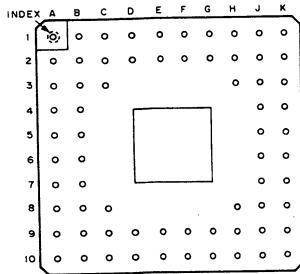
VDD = +2 to +6V

PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL
1A	I	BGACK	3D	-	VDD	7B	O	A20	11N	I/O	D9
1B	-	GND	3E	-	VDD	7C	O	A21	12A	O	A11
1C	I/O	RESET	3F	O	FC1	7L	-	GND	12B	O	A10
1D	-	VDD	3G	O	DBEN	7M	I/O	D16	12C	O	A7
1E	O	FC0	3H	I	DSACK0	7N	-	GND	12D	O	A4
1F	O	SIZ0	3J	-	GND	8A	O	A19	12E	O	A2
1G	O	ECS	3K	-	GND	8B	O	A18	12F	-	GND
1H	I	CDIS	3L	I/O	D30	8C	O	A17	12G	-	GND
1J	I	DSACK1	3M	I/O	D26	8L	I/O	D15	12H	I	IPL2
1K	-	GND	3N	I/O	D25	8M	-	VDD	12J	I	IPL0
1L	O	AS	4A	O	A28	8N	-	VDD	12K	I/O	D1
1M	O	DS	4B	O	A30	9A	-	VDD	12L	I/O	D3
1N	I/O	D31	4C	O	A0	9B	-	GND	12M	I/O	D5
2A	O	A1	4L	I/O	D27	9C	O	A16	12N	I/O	D8
2B	O	BG	4M	I/O	D24	9L	I/O	D11	13A	O	A8
2C	I	CLK	4N	I/O	D22	9M	I/O	D13	13B	O	A6
2D	-	VDD	5A	O	A26	9N	I/O	D14	13C	O	A5
2E	O	RMC	5B	O	A27	10A	-	GND	13D	O	A3
2F	O	FC2	5C	O	A29	10B	O	A15	13E	O	OCS
2G	O	SIZ1	5L	I/O	D23	10C	O	A12	13F	O	IPEND
2H	I	AVEC	5M	I/O	D21	10L	I/O	D7	13G	-	VDD
2J	I	BERR	5N	I/O	D20	10M	I/O	D10	13H	-	GND
2K	I/O	HALT	6A	O	A23	10N	I/O	D12	13J	I	IPL1
2L	O	R/W	6B	O	A24	11A	O	A14	13K	I/O	D0
2M	I/O	D29	6C	O	A25	11B	O	A13	13L	I/O	D2
2N	I/O	D28	6L	I/O	D19	11C	O	A9	13M	I/O	D4
3A	O	A31	6M	I/O	D18	11G	-	VDD	13N	-	VDD
3B	I	BR	6N	I/O	D17	11L	-	GND			
3C	-	GND	7A	O	A22	11M	I/O	D6			

13K	D0	A0	4C	INPUT
12K	D1	A1	4A	AVEC : AUTOVECTOR
13J	D2	A2	4B	BERR : BUS ERROR
13I	D3	A3	4D	BGACK : BUS GRANT ACKNOWLEDGE
13H	D4	A4	4E	BR : BUS REQUEST
13G	D5	A5	4F	CDIS : CACHE DISABLE CONTROL
13F	D6	A6	4G	CLK : CLOCK
13E	D7	A7	4H	DSACK0, DSACK1 : DATA TRANSFER AND SIZE ACKNOWLEDGE
13D	D8	A8	4I	IPL0 - IPL2 : INTERRUPT PRIORITY CONTROL
13C	D9	A9	4J	OUTPUT
13B	D10	A10	4K	A0 - A31 : ADDRESS BUS
13A	D11	A11	4L	AS : ADDRESS STROBE
13	D12	A12	4M	BG : BUS GRANT
12	D13	A13	4N	DBEN : DATA BUFFER ENABLE
11	D14	A14	4P	DS : DATA STROBE
10	D15	A15	4Q	ECS : EXTERNAL CYCLE START
9	D16	A16	4R	FC0 - FC2 : FUNCTION CODE SIGNALS
8	D17	A17	4S	IPEND : INTERRUPT PENDING
7	D18	A18	4T	OCS : OPERAND CYCLE START
6	D19	A19	4U	R/W : READ/WRITE
5	D20	A20	4V	RMC : READ-MODIFY-WRITE CYCLE
4	D21	A21	4W	SIZ0 - SIZ1 : TRANSFER SIZE
3	D22	A22	4X	INPUT/OUTPUT
2	D23	A23	4Y	D0 - D31 : DATA BUS
1	D24	A24	4Z	HALT : HALT
	D25	A25	4A	RESET : RESET
	D26	A26	4B	
	D27	A27	4C	
	D28	A28	4D	
	D29	A29	4E	
	D30	A30	4F	
	D31	A31	4G	
12J	IPL0	1E	FC0	
13J	IPL1	3F	FC1	
12H	IPL2	2F	FC2	
2H	AVEC	1F	SIZ0	
1H	CDIS	2G	SIZ1	
3B	BR	1G	ECS	
1A	BGACK	3E	OCS	
2J	BERR	4E	RMC	
3H	DSACK0	4L	AS	
1J	DSACK1	4M	DS	
2C	CLK	4N	DBEN	
1C	RESET	4P	R/W	
2K	HALT	4Q	IPEND	
		4R	BG	

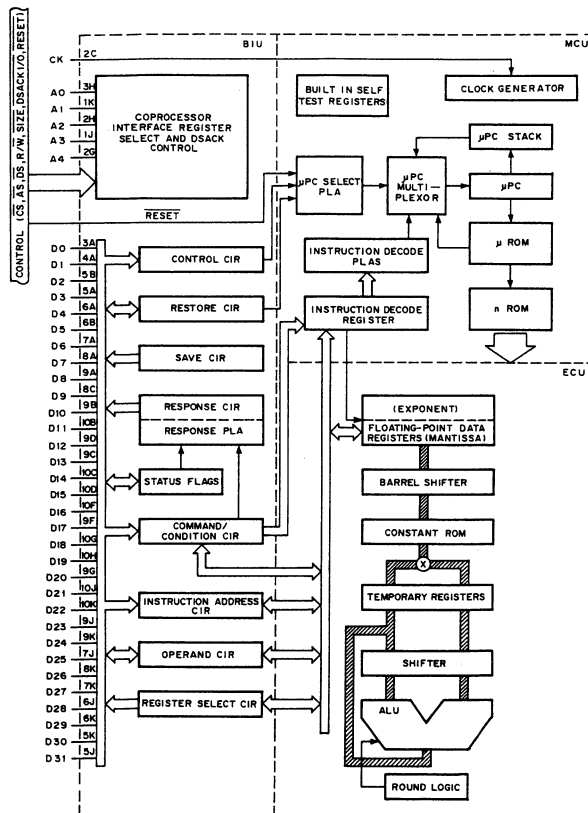
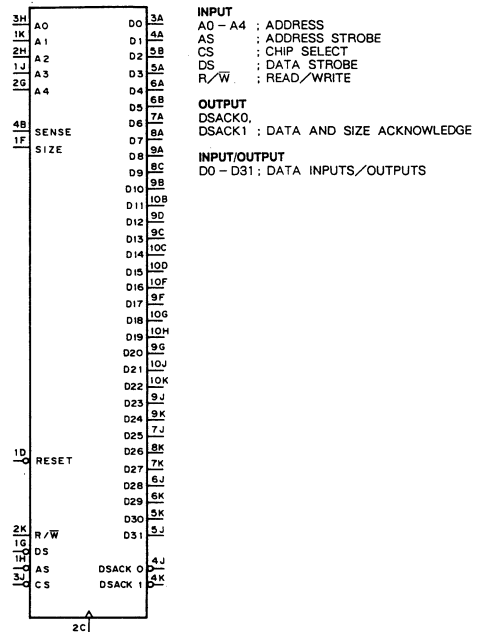


MC68881RC25 (MOTOROLA) (CLOCK FREQUENCY : 25MHz)
C-MOS FLOATING-POINT COPROCESSOR
- BOTTOM VIEW -



VDD = +2 to +6V

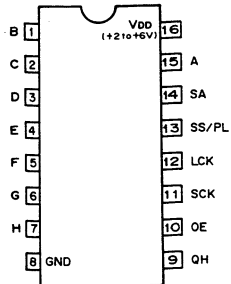
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1A	-	VDD	2H	I	A2	6A	I/O	D4	9D	I/O	D12
1B	-	VDD	2J	-	VDD	6B	I/O	D5	9E	-	VDD
1C	-	GND	2K	I	R/W	6J	I/O	D28	9F	I/O	D17
1D	I	RESET	3A	I/O	D0	6K	I/O	D29	9G	I/O	D20
1E	-	NC	3B	-	GND	7A	I/O	D6	9H	-	GND
1F	I	SIZE	3C	-	GND	7B	-	GND	9J	I/O	D23
1G	I	DS	3H	I	A0	7J	I/O	D25	9K	I/O	D24
1H	I	AS	3J	I	CS	7K	I/O	D27	10A	-	GND
1J	I	A3	3K	-	GND	8A	I/O	D7	10B	I/O	D11
1K	I	A1	4A	I/O	D1	8B	-	VDD	10C	I/O	D14
2A	-	GND	4B	I	SENSE	8C	I/O	D9	10D	I/O	D15
2B	-	GND	4J	O	DSACK0	8H	-	VDD	10E	-	GND
2C	I	CK	4K	O	DSACK1	8J	-	GND	10F	I/O	D16
2D	-	GND	5A	I/O	D3	8K	I/O	D26	10G	I/O	D18
2E	-	VDD	5B	I/O	D2	9A	I/O	D8	10H	I/O	D19
2F	-	GND	5J	I/O	D31	9B	I/O	D10	10J	I/O	D21
2G	I	A4	5K	I/O	D30	9C	I/O	D13	10K	I/O	D22



MC74HC589F (MOTOROLA) FLAT PACKAGE

C-MOS 8-BIT SERIAL OR PARALLEL INPUT/SERIAL OUTPUT
SHIFT REGISTER WITH 3-STATE OUTPUT

- TOP VIEW -



A-F: PARALLEL DATA INPUTS
LCK: LATCH CLOCK INPUT
OE: OUTPUT ENABLE INPUT
QH: SERIAL DATA OUTPUT
SA: SERIAL DATA INPUT
SCK: SHIFT CLOCK INPUT
SS/PL: SERIAL SHIFT/PARALLEL LOAD

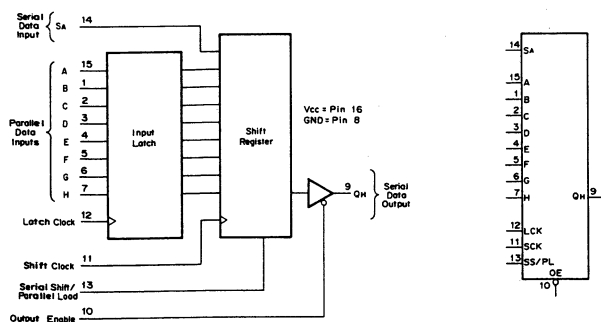
FUNCTION TABLE

OUTPUT ENABLE	INPUTS				OUTPUT QH	RESULTING FUNCTION
	SA	A-H	LCK	SCK		
H	X	X	X	X	Z	QH is in the high impedance state
L	H	L	X	X	a-h	Parallel Data is stored in the input latch. The state of the shift register is unaffected
L	L	X	X	X	a-h	Parallel Data is stored in the input latch and loaded into the shift register
L	L	L	X	X	hL*	Parallel Data stored in the input latch is loaded into the shift register
L	H	X	X	X	QH	A low logic level is shifted into the shift register
L	H	X	X	X	QH	A high logic level is shifted into the shift register
L	H	X	X	X	QH	Serial Data is shifted into the shift register and parallel Data is stored in the input latch

* hL = the data stored in stage H of the input latch
X = don't care

QH = Data shifted from stage G
a-h = Data at inputs A-H, respectively
Z = High Impedance State

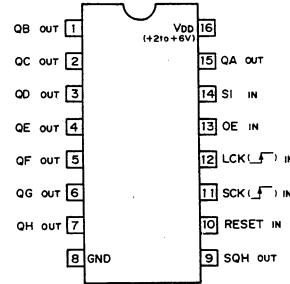
BLOCK DIAGRAM



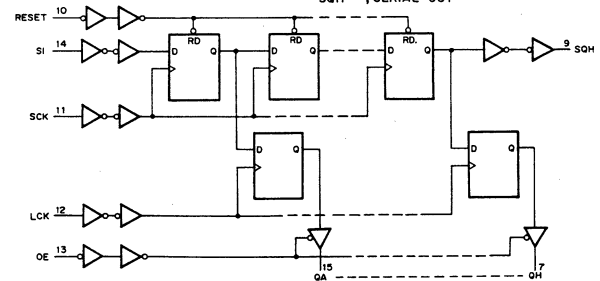
MC74HC595AF (MOTOROLA) FLAT PACKAGE

C-MOS 8-BIT SERIAL-INPUT/SERIAL- OR PARALLEL-OUTPUT
SHIFT REGISTER WITH LATCHED 3-STATE OUTPUT

- TOP VIEW -

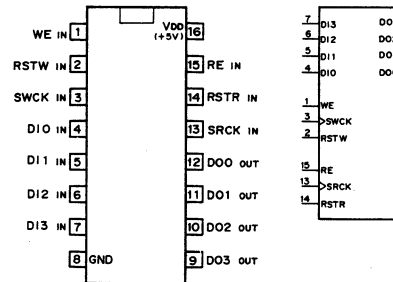


OE: OUTPUT ENABLE INPUT
LCK: LATCH CLOCK INPUT
SCK: SHIFT CLOCK INPUT
RESET: SHIFT-REGISTER RESET INPUT
SI: SERIAL IN
QA-QH: PARALLEL OUTPUTS
QH: SERIAL OUT

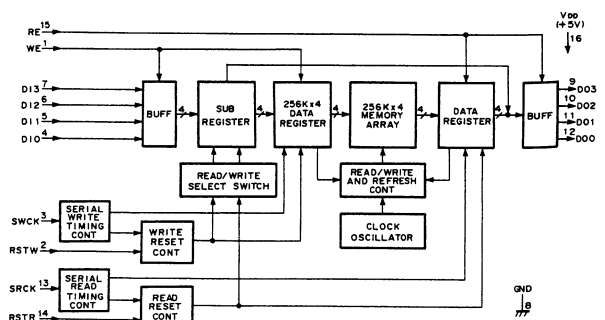


MSM514221A-4RS (OKI)

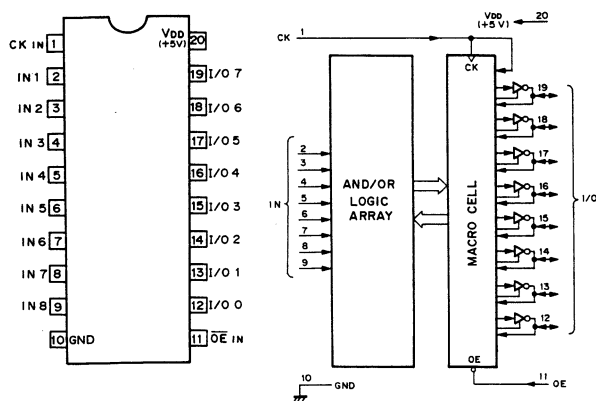
C-MOS 1M (262263x4)-BIT DYNAMIC SERIAL ACCESS MEMORY
- TOP VIEW -



DIO - D13: DATA INPUTS
DO0 - DO3: DATA OUTPUTS
RE: READ ENABLE INPUT
RSTR: READ RESET INPUT
RSTW: WRITE RESET INPUT
SRCK: READ CLOCK INPUT
SWCK: WRITE CLOCK INPUT
WE: WRITE ENABLE INPUT

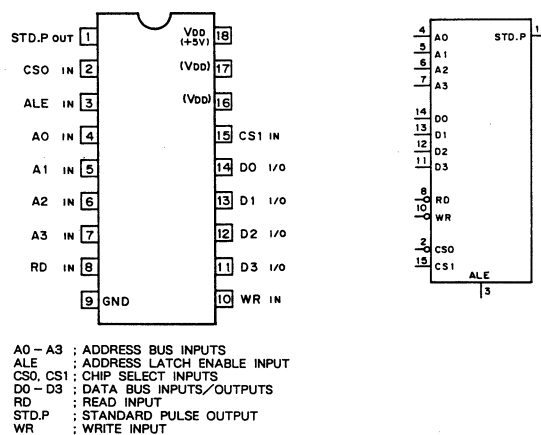


PALCE16V8H-15PC (AMD/MONOLITHIC MEMORIES)
C-MOS ELECTRICALLY ERASABLE PROGRAMMABLE LOGIC DEVICE
- TOP VIEW -



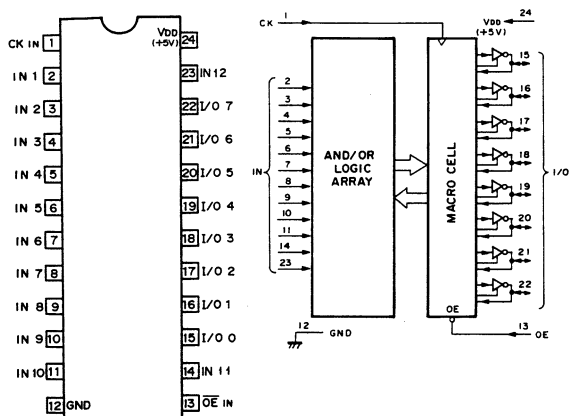
* ABOVE DIAGRAM SHOWS CONDITIONS BEFORE PROGRAMMING.

RTC-62421B (EPSON)
C-MOS REAL TIME CLOCK
- TOP VIEW -

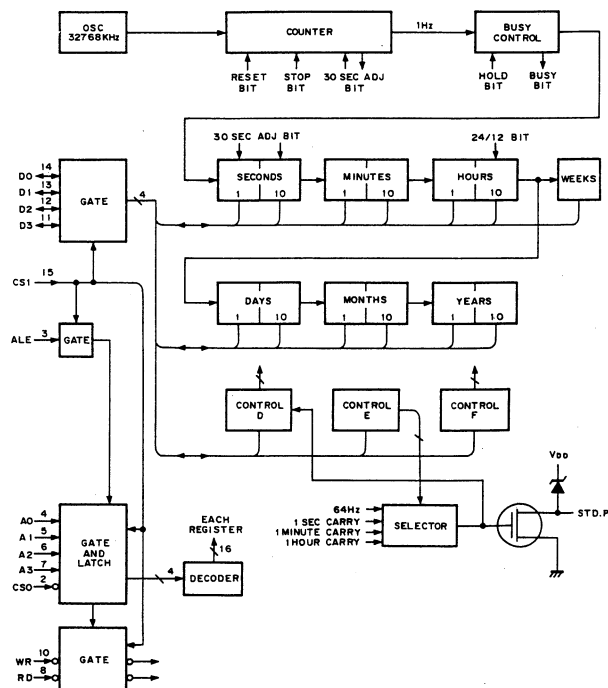


A0 - A3 : ADDRESS BUS INPUTS
ALE : ADDRESS LATCH ENABLE INPUT
CS0, CS1 : CHIP SELECT INPUTS
D0 - D3 : DATA BUS INPUTS/OUTPUTS
RD : READ INPUT
STD.P : STANDARD PULSE OUTPUT
WR : WRITE INPUT

PALCE20V8H-15PC (AMD/MONOLITHIC MEMORIES)
C-MOS ELECTRICALLY ERASABLE PROGRAMMABLE LOGIC DEVICE
- TOP VIEW -

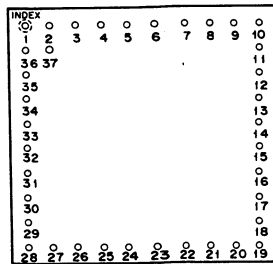


* ABOVE DIAGRAM SHOWS CONDITIONS BEFORE PROGRAMMING.



SBX1601A (SONY)

8- OR 10-BIT PARALLEL-TO-SERIAL CONVERTER
- BOTTOM VIEW -



INPUT
D9X - D0X, D9Y - D0Y : PARALLEL DATA INPUTS
PCX, PCY : PARALLEL CLOCK INPUTS
FV : VCO FREQ. ADJ. INPUT
RSE : VCO RANGE SELECT INPUT (H: HIGH RANGE)
TE1 : TEST TERMINAL (LOW = TEST)
TTL/ECL : VCC FOR INPUT LEVEL SELECT
(+5V = TTL, GND = ECL)

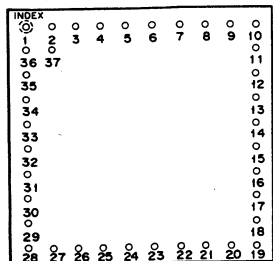
OUTPUT
LST : PLL LOCK DETECT OUTPUT (H: LOCK)
PCX : PARALLEL CLOCK OUTPUT
SX, SY : SERIAL DATA OUTPUTS
TE2 : TEST TERMINAL

PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	O	LST	11	I	D7Y	21	I	D2Y	31	I	PCY
2	-	GND	12	I	D6Y	22	I	D1X	32	-	GND
3	O	SX	13	I	D6X	23	I	D1Y	33	I	FV
4	O	SY	14	I	D5X	24	I	D0X(LSB)	34	O	TE2
5	-	GND	15	I	D5Y	25	I	D0Y	35	I	TE1
6	I	D9X(MSB)	16	I	D4X	26	-	VEE1	36	O	PCX
7	I	D9Y	17	I	D4Y	27	-	VEE2	37	-	NC
8	I	D8X	18	I	D3X	28	I	RSE			
9	I	D8Y	19	I	D3Y	29	-	TTL/ECL			
10	I	D7X	20	I	D2X	30	I	PCY			

VEE1 = -5V
VEE2 = -3.5V

SBX1602A (SONY)

8- OR 10-BIT SERIAL-TO-PARALLEL CONVERTER
- BOTTOM VIEW -



INPUT
ADS : SERIAL DATA SELECT INPUT (H: DIGITAL, L: ANALOG)
AIX, AIY : EQUALIZER INPUTS
DIX, DIY : SERIAL DATA INPUTS
ESI : PLL SIGNAL INPUT
OFS : AGC OFFSET ADJ. INPUT
FV : VCO FREQ. ADJ. INPUT
RSE : VCO RANGE SELECT INPUT (H: HIGH RANGE)

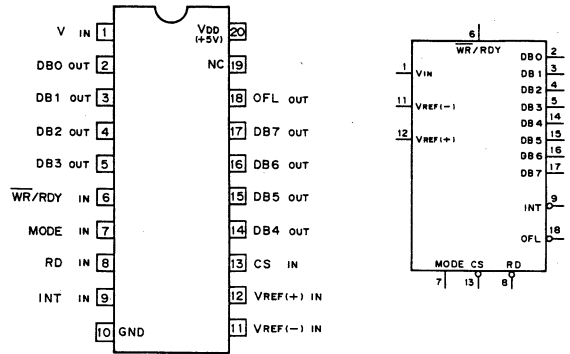
OUTPUT
CX : EQUALIZER DETECT OUTPUT (L: NO INPUT)
D8 - D0 : PARALLEL DATA OUTPUTS
DPR : SERIAL DATA DETECT OUTPUT (L: NO INPUT)
ESO : TEST NODE PLL ERROR SIGNAL OUTPUT
EVR : REFERENCE VOLTAGE FOR PARALLEL OUTPUT
MON : EQUALIZER MONITOR OUTPUT
PCX : PARALLEL CLOCK OUTPUT
SX, SY : SERIAL DATA OUTPUTS
SYN : TRS DETECT OUTPUT
TN1 : TEST TERMINAL

PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	O	ESO	11	O	D7	21	O	EVR	31	O	MON
2	-	GND	12	O	D6	22	I	RSE	32	I	ADS
3	O	SY	13	O	D5	23	-	VEE3	33	I	DIX
4	O	SX	14	O	D4	24	-	GND	34	I	DIY
5	-	GND	15	O	D3	25	I	AIY	35	O	DPR
6	O	TN1	16	O	D2	26	I	AIX	36	I	FV
7	-	VEE1	17	O	D1	27	-	GND	37	I	ESI
8	-	VEE2	18	O	D0(LSB)	28	I	OFS			
9	O	D9(MSB)	19	O	PCX	29	O	CX			
10	O	D8	20	O	SYN	30	-	GND			

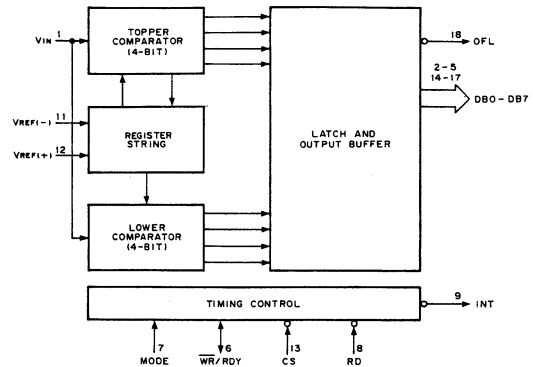
VEE1, 3 = -5V
VEE2 = -3.5V

SM6103S (NPC) FLAT PACKAGE

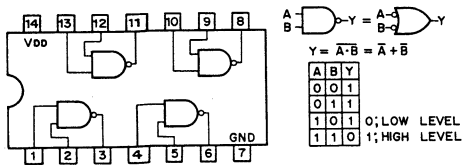
C-MOS 8-BIT A/D CONVERTOR
- TOP VIEW -



CS : CHIP SELECT INPUT
DB0 - DB7 : DIGITAL DATA OUTPUTS
INT : INTERRUPT OUTPUT
MODE : MODE SELECT INPUT (WR-RD MODE/RD MODE)
OFL : OVERFLOW OUTPUT
RD : READ INPUT
VIN : ANALOG VOLTAGE INPUT
VREF (+) : TOP REFERENCE VOLTAGE INPUT
VREF (-) : BOTTOM REFERENCE VOLTAGE INPUT
WR/RDY : WR-RD MODE → WR INPUT
RD MODE → RDY INPUT



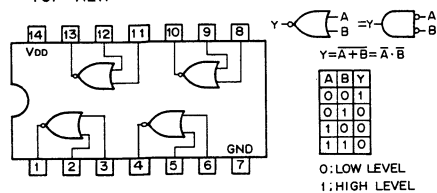
SN74HC00ANS (TI) FLAT PACKAGE
TC74AC00F (TOSHIBA) FLAT PACKAGE
C-MOS QUAD 2-INPUT NAND GATE
- TOP VIEW -



NOTE:

TYPE	V _{DD}
TC74AC00P	+2 to +5.5V
TC74AC00F	
MC74HCT00N	+5V
74ACT00PC	
OTHER TYPES	+2 to +6V

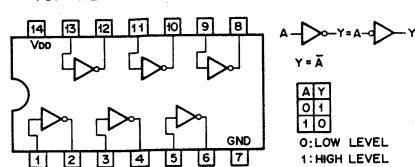
SN74HC02ANS (TI) FLAT PACKAGE
TC74AC02F (TOSHIBA) FLAT PACKAGE
C-MOS QUAD 2-INPUT NOR GATE
- TOP VIEW -



NOTE:

TYPE	V _{DD}
TC74AC02F	+2 to +5.5V
OTHER TYPES	+2 to +6V

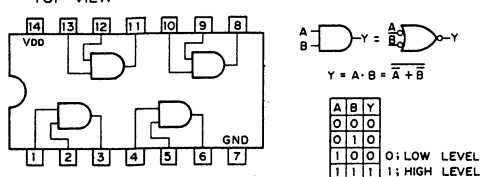
SN74HC04ANS (TI) FLAT PACKAGE
TC74AC04F (TOSHIBA) FLAT PACKAGE
TC74ACT04F (TOSHIBA) FLAT PACKAGE
C-MOS HEX INVERTER
- TOP VIEW -



NOTE:

TYPE	V _{DD}
74ACT04 TYPES	+5V
74HCT04 TYPES	
TC74AC04F	+2 to +5.5V
TC74ACT04F	+4.5 to +5.5V
OTHER TYPES	+2 to +6V

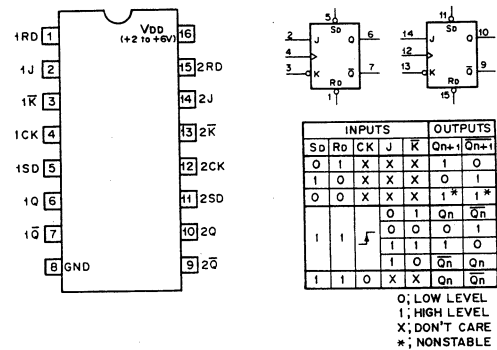
SN74HC08ANS (TI) FLAT PACKAGE
TC74AC08F (TOSHIBA) FLAT PACKAGE
C-MOS QUAD 2-INPUT AND GATE
- TOP VIEW -



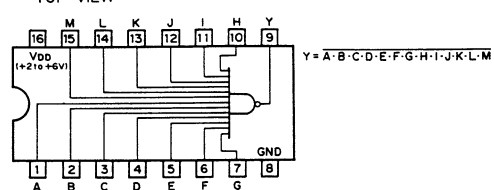
NOTE:

TYPE	V _{DD}
TC74AC08F	+2 to +5.5V
OTHER TYPES	+2 to +6V

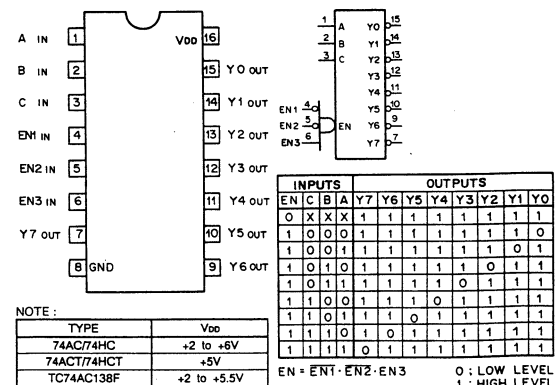
SN74HC109NS (TI) FLAT PACKAGE
C-MOS J-K FLIP-FLOP WITH DIRECT SET/RESET
- TOP VIEW -



SN74HC133NS (TI) FLAT PACKAGE
C-MOS 13-INPUT NAND GATE
- TOP VIEW -



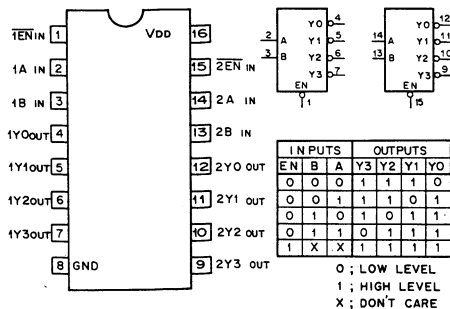
SN74HC138ANS (TI) FLAT PACKAGE
TC74AC138F (TOSHIBA) FLAT PACKAGE
C-MOS 3-TO-8 LINE DECODER/DEMULPLEXER
- TOP VIEW -



NOTE:

TYPE	V _{DD}
74ACT138HC	+2 to +6V
74ACT138HCT	+5V
TC74AC138F	+2 to +5.5V

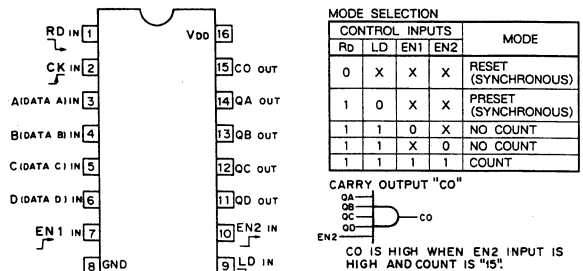
SN74HC139ANS (TI) FLAT PACKAGE
TC74AC139F (TOSHIBA) FLAT PACKAGE
C-MOS DUAL 2-TO-4 DECODER/DEMULTIPLEXER
- TOP VIEW -



NOTE:

TYPE	V _{DD}
74AC/74HC	+2 to +6V
74ACT	+5V
TC74AC139F	+2 to +5.5V

SN74HC163ANS (TI) FLAT PACKAGE
TC74AC163F (TOSHIBA) FLAT PACKAGE
C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
- TOP VIEW -



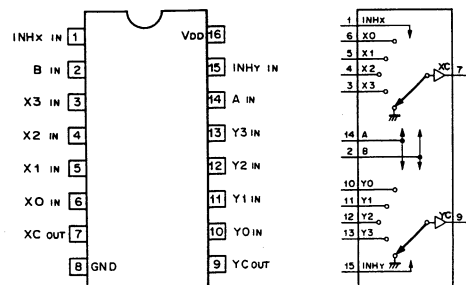
NOTE:

TYPE	V _{DD}
74ACT	+5V
TC74AC163F	+2 to +5.5V
OTHER TYPES	+2 to +6V

COUNT SEQUENCE

COUNT	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

SN74HC153ANS (TI) FLAT PACKAGE
C-MOS DUAL 4-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
- TOP VIEW -



NOTE:

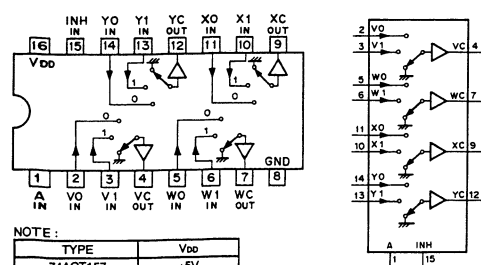
TYPE	V _{DD}
EXCEPT FOL TYPE	+2 to +6V
74ACT153PC	+5V
74ACT153SJ	+2 to +5.5V
TC74AC153P	+2 to +5.5V

CONTROL IN ON CHANNEL

INH B A	
0 0 0	0
0 0 1	1
0 1 0	2
0 1 1	3
1 X X	GND

0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

SN74HC157ANS (TI) FLAT PACKAGE
TC74AC157F (TOSHIBA) FLAT PACKAGE
C-MOS QUAD 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
- TOP VIEW -



NOTE:

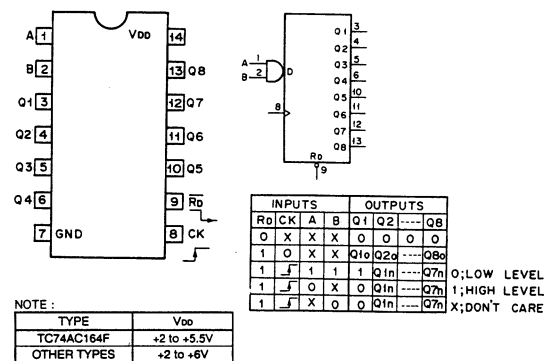
TYPE	V _{DD}
74ACT157	+5V
TC74AC157P	+2 to +5.5V
TC74AC157F	+2 to +5.5V
OTHER TYPES	+2 to +6V

CONT. IN ON CHANNEL

INH A B C	
0 0 0	0
0 0 1	1
0 1 0	2
0 1 1	3
1 X X	GND

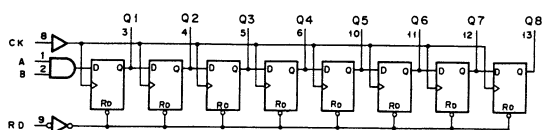
0: LOW LEVEL
1: HIGH LEVEL
X: DON'T CARE

SN74HC164NS (TI) FLAT PACKAGE
TC74AC164F (TOSHIBA) FLAT PACKAGE
C-MOS 8-BIT SERIAL-IN/PARALLEL-OUT SHIFT REGISTER
- TOP VIEW -



NOTE:

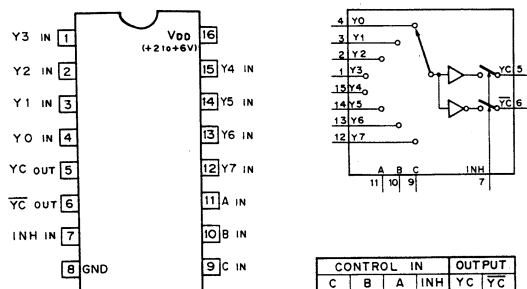
TYPE	V _{DD}
TC74AC164F	+2 to +5.5V
OTHER TYPES	+2 to +6V



SN74HC251NS (TI) FLAT PACKAGE

C-MOS 8-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER WITH 3-STATE OUTPUT

- TOP VIEW -



CONTROL IN			OUTPUT	
C	B	A	YC	Y _C
X	X	X	1	HI-Z
0	0	0	0	Y ₀
0	0	1	0	Y ₁
0	1	0	0	Y ₂
0	1	1	0	Y ₃
1	0	0	0	Y ₄
1	0	1	0	Y ₅
1	1	0	0	Y ₆
1	1	1	0	Y ₇

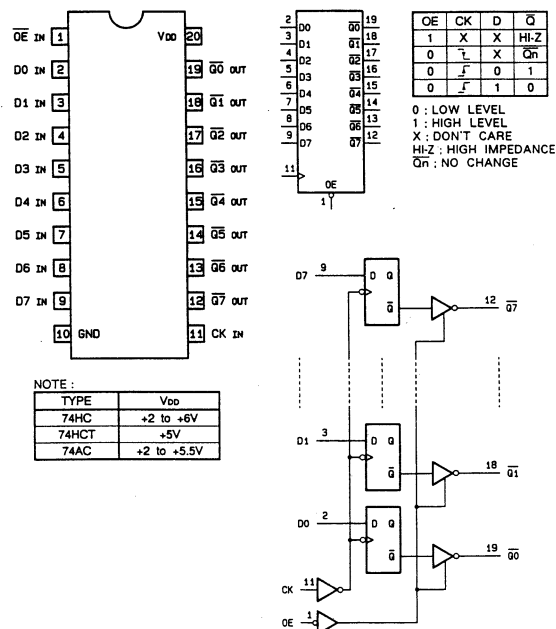
0 : LOW LEVEL
1 : HIGH LEVEL
HI-Z : HIGH IMPEDANCE

SN74HC564NS (TI) FLAT PACKAGE

TC74AC564F (TOSHIBA) FLAT PACKAGE

C-MOS D-TYPE FLIP-FLOPS WITH 3-STATE OUTPUTS

- TOP VIEW -



TYPE	V _{DD}
74HC	+2 to +6V
74HCT	+5V
74AC	+2 to +5.5V

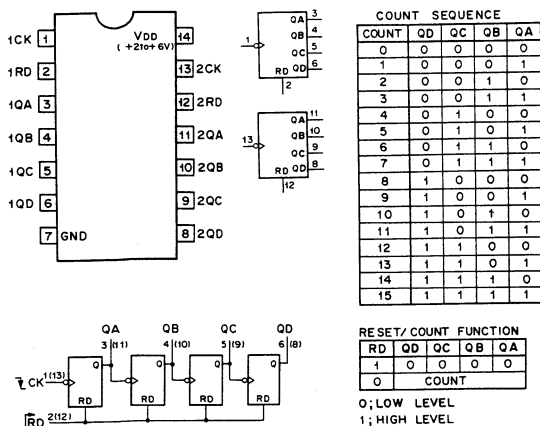
OE	CK	D	Q
1	X	X	HI-Z
0	1	X	Qn
0	1	0	1
0	1	1	0

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE
HI-Z : HIGH IMPEDANCE
Qn : NO CHANGE

SN74HC393ANS (TI) FLAT PACKAGE

C-MOS 4-BIT BINARY COUNTER

- TOP VIEW -



COUNT SEQUENCE

COUNT	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

RESET/COUNT FUNCTION

RD	QD	QC	QB	QA
1	0	0	0	0
0				COUNT

0 : LOW LEVEL
1 : HIGH LEVEL

SN74HC574ANS (TI) FLAT PACKAGE

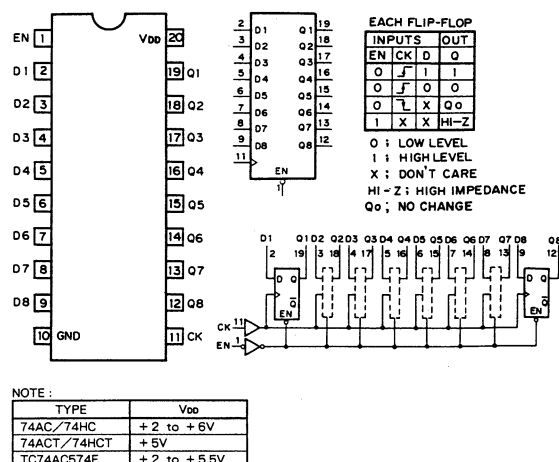
SN74HCT574ANS (TI) FLAT PACKAGE

TC74AC574F (TOSHIBA) FLAT PACKAGE

TC74ACT574F (TOSHIBA) FLAT PACKAGE

C-MOS 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP

- TOP VIEW -



TYPE	V _{DD}
74AC/74HC	+2 to +6V
74ACT/74HCT	+5V
TC74AC574F	+2 to +5.5V

EACH FLIP-FLOP			
EN	CK	D	Q
0	1	1	1
0	1	0	0
0	1	X	Qn
1	X	X	HI-Z

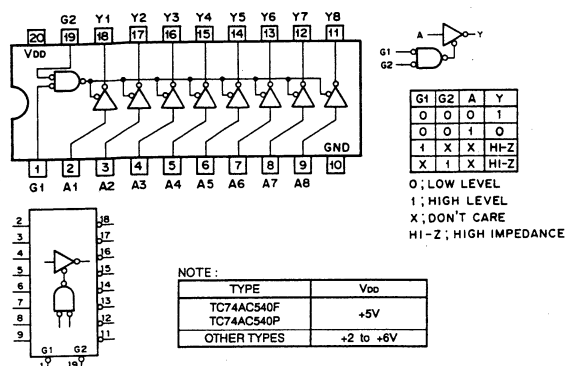
0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE
HI-Z : HIGH IMPEDANCE
Qn : NO CHANGE

SN74HC540ANS (TI) FLAT PACKAGE

TC74AC540F (TOSHIBA) FLAT PACKAGE

C-MOS 3-STATE INVERTING BUFFER/LINE DRIVER/LINE RECEIVER

- TOP VIEW -



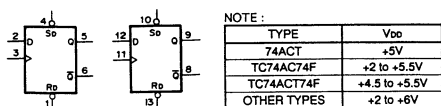
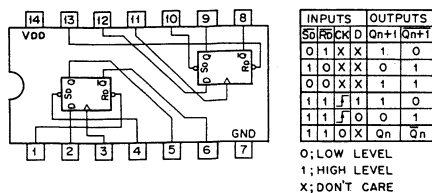
G1	G2	A	Y
0	0	0	1
0	0	1	0
1	X	X	HI-Z
X	1	X	HI-Z

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE
HI-Z : HIGH IMPEDANCE

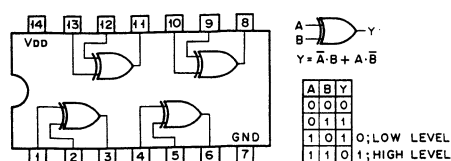
NOTE:

TYPE	V _{DD}
TC74AC540F	+5V
OTHER TYPES	+2 to +6V

SN74HC74ANS (TI) FLAT PACKAGE
TC74AC74F (TOSHIBA) FLAT PACKAGE
TC74ACT74F (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP FLOP WITH DIRECT SET/RESET
- TOP VIEW -

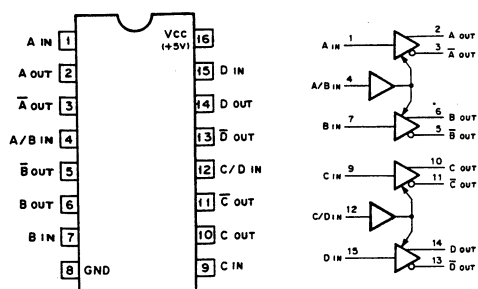


SN74HC86ANS (TI) FLAT PACKAGE
TC74AC86F (TOSHIBA) FLAT PACKAGE
C-MOS EXCLUSIVE OR GATE
- TOP VIEW -



TYPE	VDD
TC74AC86F	+2 to +5.5V
OTHER TYPES	+2 to +6V

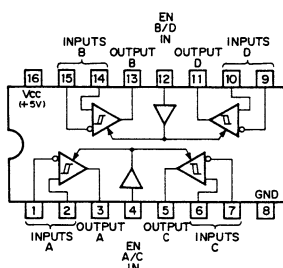
SN75ALS194N (TI)
QUAD RS-422 LINE DRIVER WITH 3-STATE OUTPUTS
- TOP VIEW -



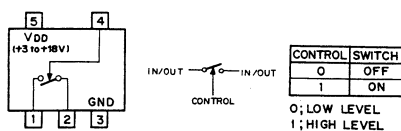
A, B, C, D IN	A/B, C/D IN	A, B, C, D OUT	A, B, C, D OUT
0	0	0	1
1	0	1	0
X	1	Hi-Z	Hi-Z

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
Hi-Z; HIGH IMPEDANCE

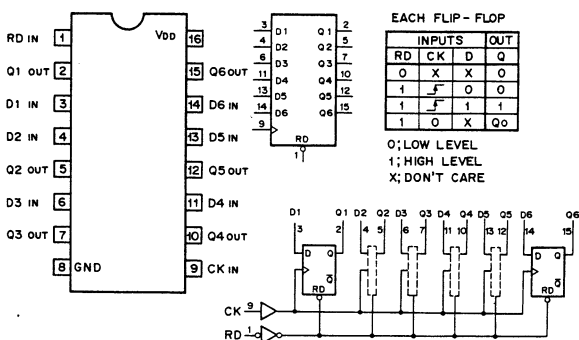
SN75ALS195J (TI)
QUAD RS-422/423 LINE RECEIVER WITH 3-STATE OUTPUTS
- TOP VIEW -



TC4S66F (TOSHIBA)
C-MOS BILATERAL ANALOG SWITCH
- TOP VIEW -

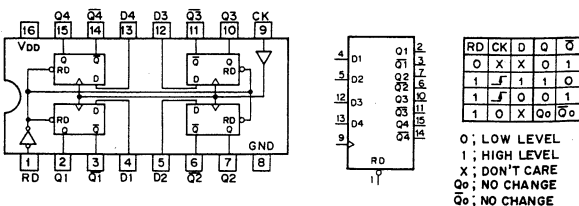


TC74AC174F (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP-FLOP WITH RESET
- TOP VIEW -



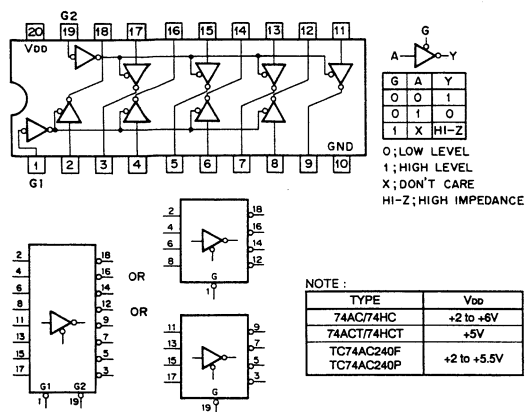
TYPE	VDD
74AC	+3.3 to +5V
74ACT	+5V
74HC	+2 to +6V
TC74AC174F	+2 to +5.5V

TC74AC175F (TOSHIBA) FLAT PACKAGE
C-MOS D-TYPE FLIP-FLOP WITH RESET
- TOP VIEW -

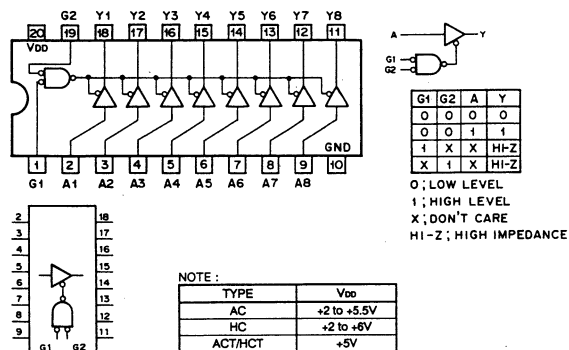


TYPE	VDD
74AC	+2 to +5.5V
74ACT	+5V
74HC	+2 to +6V

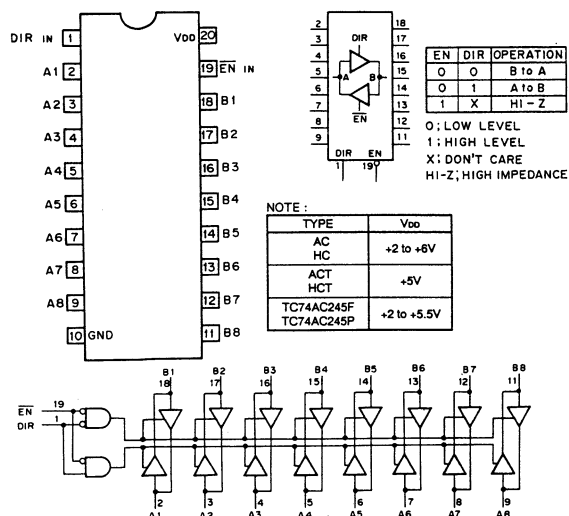
TC74AC240F (TOSHIBA) FLAT PACKAGE
C-MOS 3-STATE INVERTER/LINE DRIVER
- TOP VIEW -



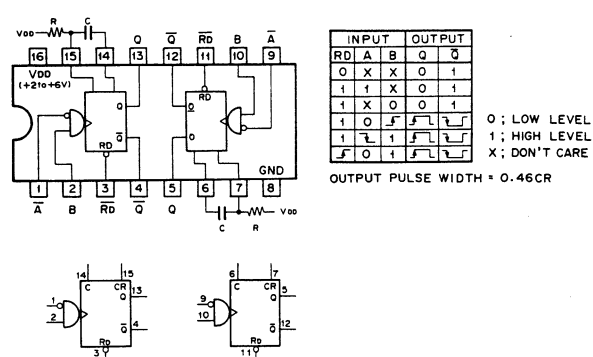
TC74AC541F (TOSHIBA) FLAT PACKAGE
C-MOS BUFFERS AND LINE DRIVERS WITH 3-STATE OUTPUTS
- TOP VIEW -



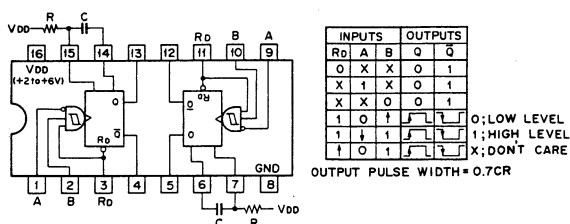
TC74AC245F (TOSHIBA) FLAT PACKAGE
TC74AC245P (TOSHIBA)
C-MOS BILATERAL BUS TRANSCEIVERS WITH 3-STATE OUTPUTS
- TOP VIEW -



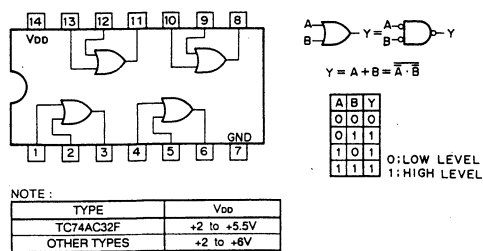
TC74HC123AF (TOSHIBA) FLAT PACKAGE
C-MOS DUAL RETRIGGERABLE MONOSTABLE MULTIVIBRATOR
- TOP VIEW -



TC74HC221AF (TOSHIBA) FLAT PACKAGE
C-MOS MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
- TOP VIEW -

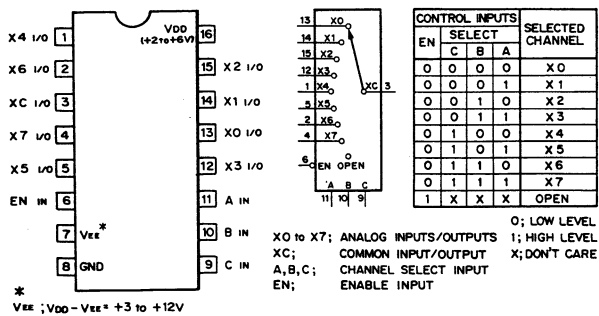


TC74AC32F (TOSHIBA) FLAT PACKAGE
C-MOS 2-INPUT OR GATE
- TOP VIEW -



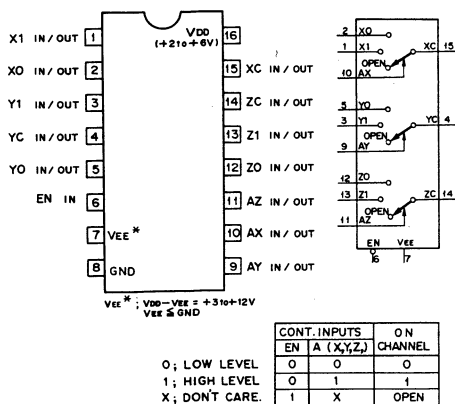
TC74HC4051AF (MOTOROLA) FLAT PACKAGE

C-MOS 8-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
- TOP VIEW -



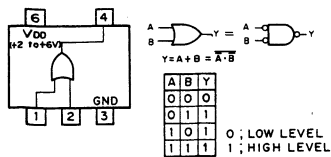
TC74HC4053AF (TOSHIBA) FLAT PACKAGE

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
- TOP VIEW -



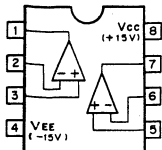
TC7S32F (TOSHIBA) FLAT PACKAGE

C-MOS 2-INPUT OR GATE
- TOP VIEW -



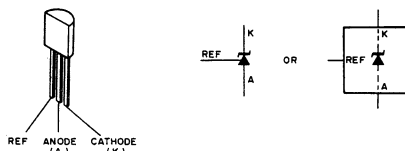
TLO82CPS (TI) FLAT PACKAGE

OPERATIONAL AMPLIFIER
(J FET-INPUT)
- TOP VIEW -



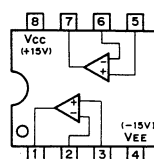
TL431CLP (TI)

ADJUSTABLE PRECISION SHUNT REGULATOR

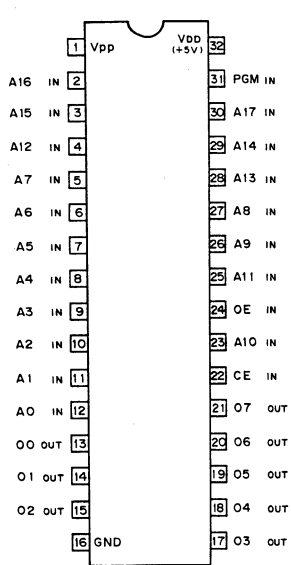


UPC4558G2 (NEC) FLAT PACKAGE

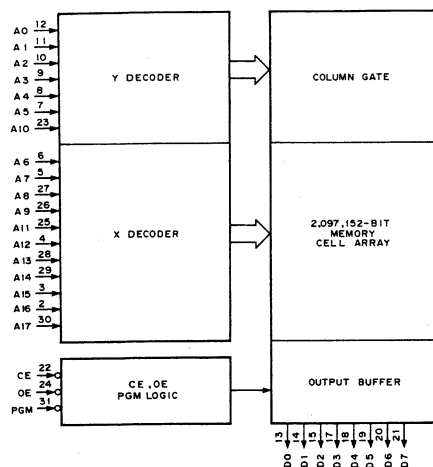
DUAL OPERATIONAL AMPLIFIER
- TOP VIEW -



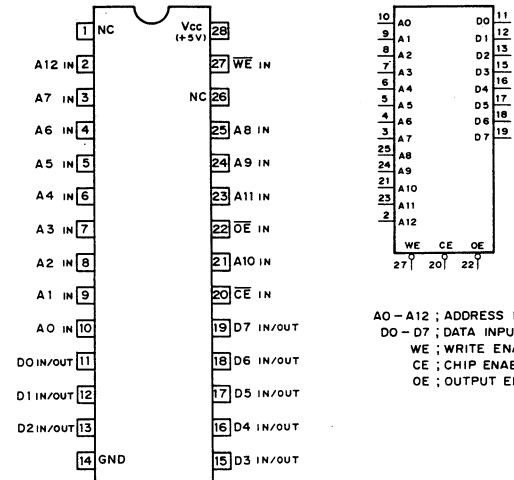
UPD27C2001D (NEC)
C-MOS 256K (262144x8)-BIT UV ERASABLE PROM
- TOP VIEW -



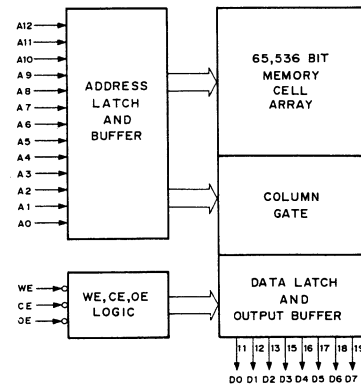
A0 - A17 : ADDRESS INPUT
O0 - O7 : DATA OUTPUT
CE : CHIP ENABLE
OE : OUTPUT ENABLE
PGM : PROGRAM INPUT



UPD28C64C-20 (NEC) (ACCESS TIME = 200ns)
C-MOS 64K (8Kx8) ELECTRICALLY ERASABLE PROM
- TOP VIEW -

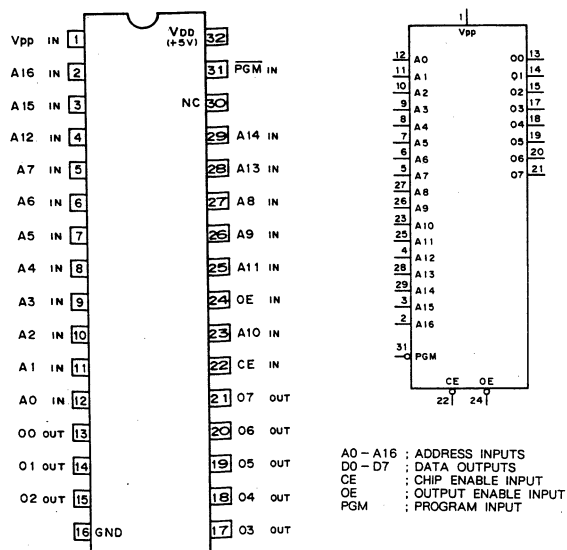


A0 - A12 : ADDRESS INPUTS
D0 - D7 : DATA INPUTS/OUTPUTS
WE : WRITE ENABLE INPUT
CE : CHIP ENABLE INPUT
OE : OUTPUT ENABLE INPUT



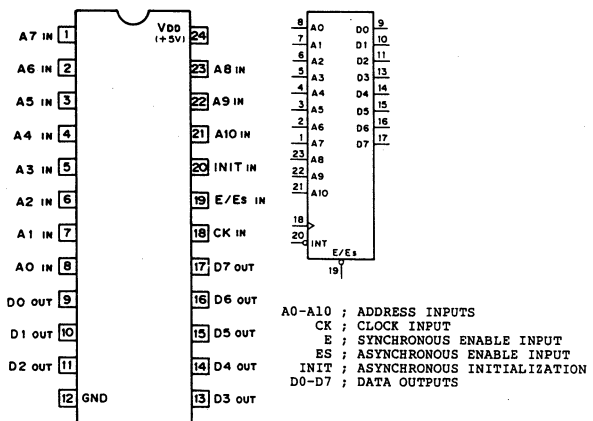
WS27C010L-12D (WAFERSCALE)

C-MOS 1M (131,072x8)-BIT UV ERASABLE PROM
- TOP VIEW -



WS57C45-35T (WAFERSCALE)

C-MOS 16K(2048x8)-BIT EPROM (WITH REGISTER)
- TOP VIEW -

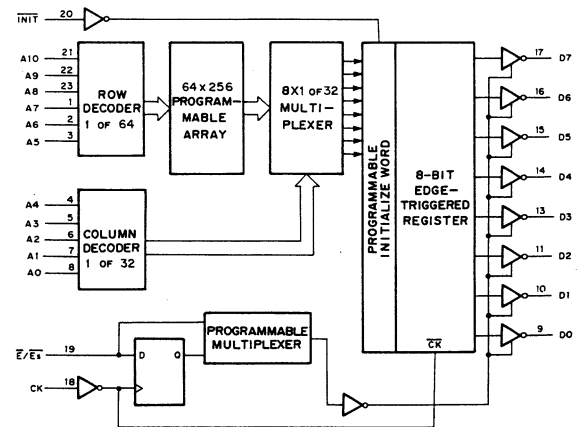
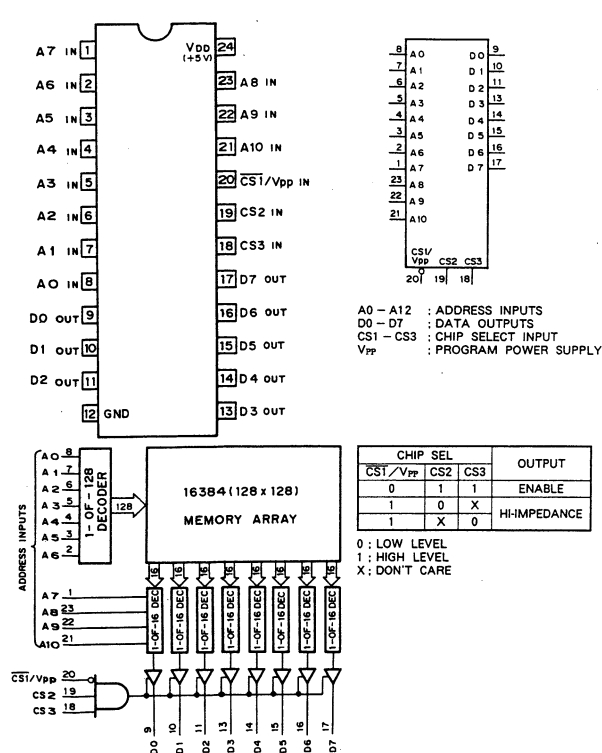


A1	A2	CK	E/ES	INIT	OUTPUTS	FUNCTION
X	X	X	0	1	DATA OUT	READ
X	X	X	1	1	HI-Z	OUTPUT DISABLE
X	X	0	1	Vpp	DATA IN	PGM
X	X	1	0	Vpp	DATA OUT	PGM VERIFY
X	X	1	1	Vpp	HI-Z	PGM INH
X	X	0	1	Vpp	DATA IN	INTELLIGENT PGM
Vpp	1	0	1	Vpp	HI-Z	PGM SYNCH ENABLE
Vpp	0	0	1	Vpp	DATA IN	PGM INITIAL BYTE
X	X	Vpp	1	0	ZEROS	BLANK CHECK ZEROS

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE
HI-Z : HIGH IMPEDANCE
VPP : PROGRAM POWER SUPPLY
(+13V to +14V)

WS57C291B-35T (WAFERSCALE)

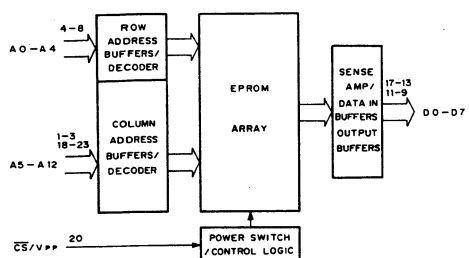
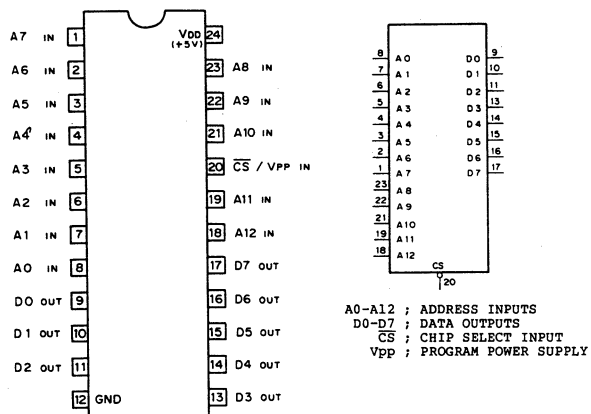
C-MOS 16K-BIT (2048x8) HIGH SPEED ERASABLE P-ROM
- TOP VIEW -



WS57C49B-35T (WAFERSCALE)

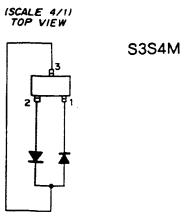
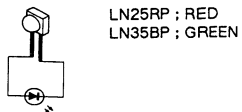
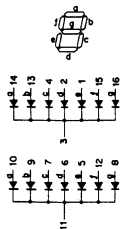
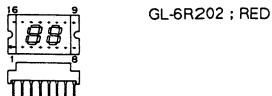
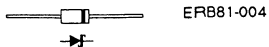
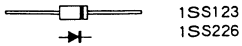
C-MOS 64K (8192x8) BIT HIGH SPEED ERASABLE PROM

- TOP VIEW -

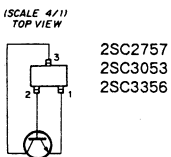
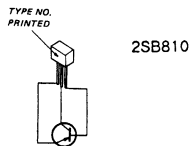
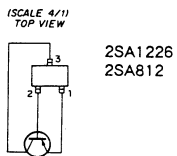


DIODE, TRANSISTOR

DIODE



TRANSISTOR



SECTION 9
SCHEMATIC DIAGRAMS

The circuit informations are provided below

Circuit Board	Circuit Function
CPU-57	CPU BOARD
SG-189	SYNC GENERATOR BOARD
WKG-5	ENHANCED WIPE BOARD
WKG-4	BASIC WIPE BOARD
KPC-1	KEY PROCESSOR BOARD
MIX-4 (A)	MIXER BOARD
MIX-6 (A)	DSK (DOWNSTREAM KEYER) BOARD
OUT-2	OUTPUT PROCESSOR BOARD
MAT-2	MATTE GENERATOR BOARD
XPT-2	DIGITAL INPUT BOARD
CN-310 (A)	CONTROL CONNECTOR BOARD
CN-311	OUTPUT CONNECTOR BOARD
CN-312 (A)	PRIMARY INPUT CONNECTOR BOARD (A)
CN-312 (B)	PRIMARY INPUT CONNECTOR BOARD (B)
CN-456	POWER SUPPLY CONNECTOR BOARD
MB-393	MOTHER BOARD
LE-76	POWER LED BOARD
EX-209	EXTENSION BOARD

回路図内において、REF. NO の近傍に下記記号が記載されていますが、これは生産時の部品データです。

In the schematic diagrams, the following marks are described nearby reference number.
These are parts data at factory.

CAPACITOR (C)

AL	}	ELECTROLYTIC
AS		
TA	}	TANTALUM
CA	}	CERAMIC
CC		
CCS		
CM		
CS	}	MYLAR
MPS		
PP		
PS		
PT	}	DIPPED MICA
MD		
MS	}	MICA

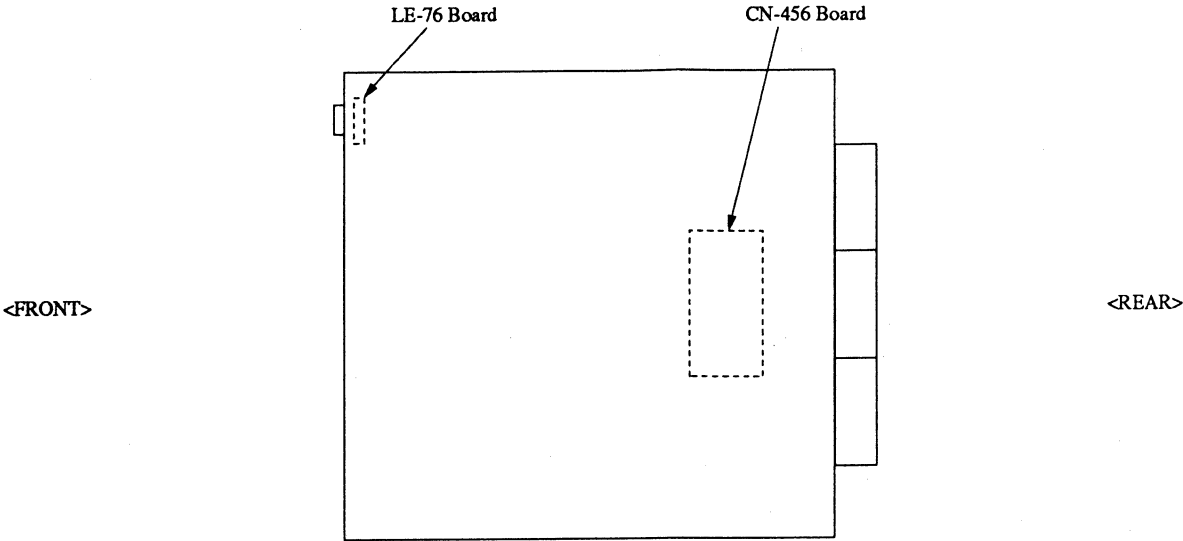
RESISTOR (R)

VARIABLE RESISTOR (RV)

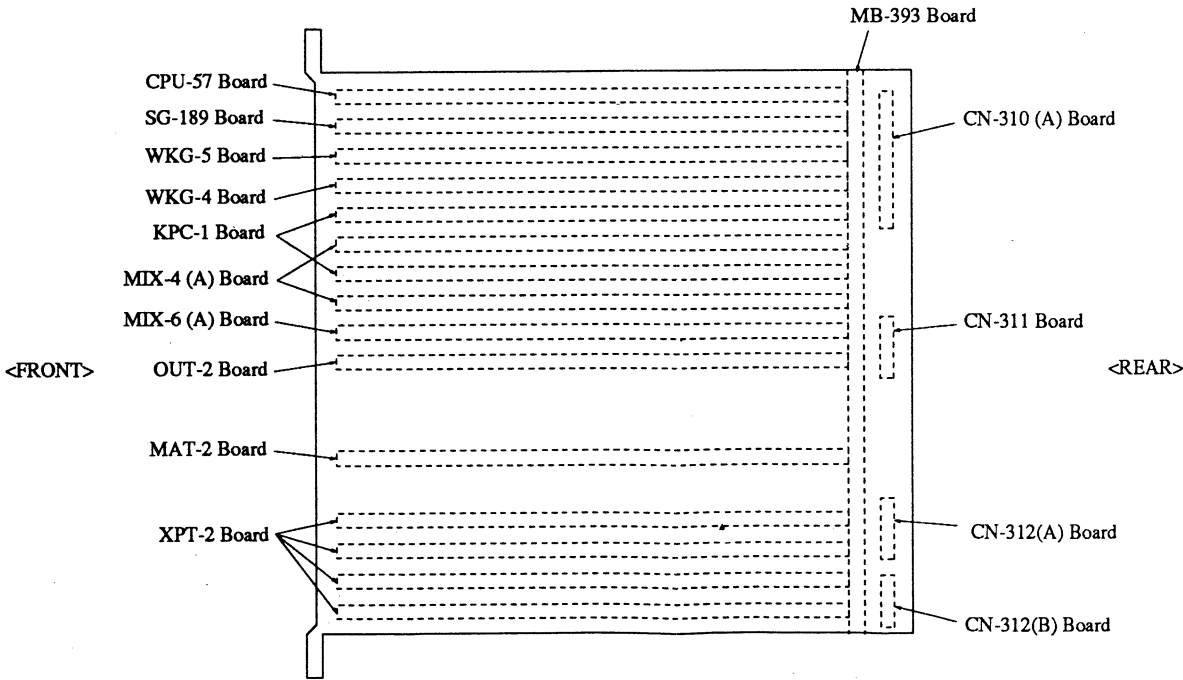
RC	}	CARBON
RD		
RF	}	FUSE
RN	}	METAL
RS		
RW	}	WIERWOUND

Location of the Printed Circuit Boards

<Power Unit: Top View>

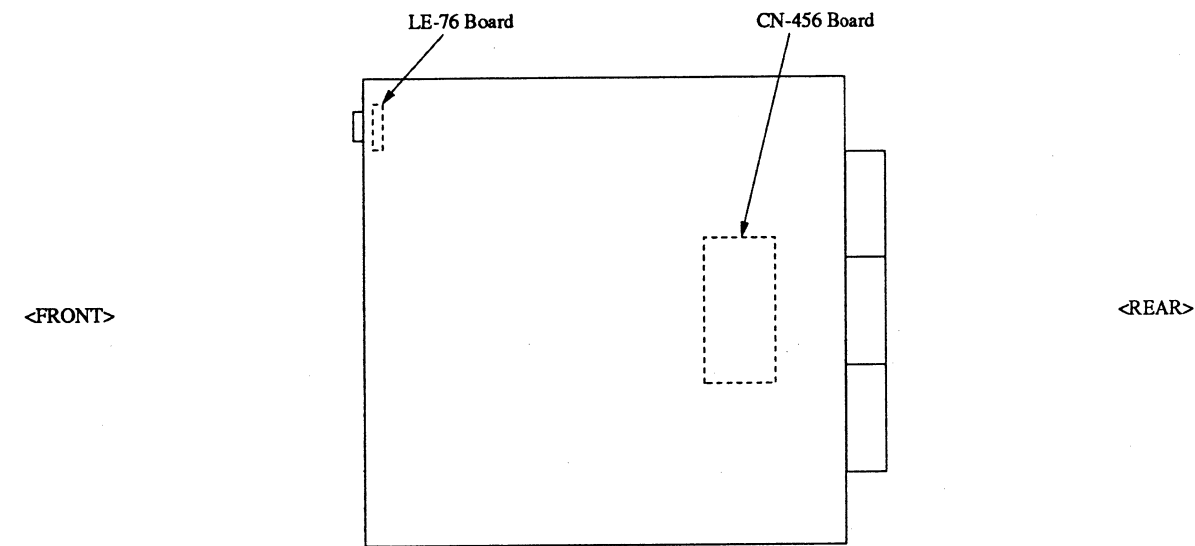


<Main Unit Chassis: Top View>

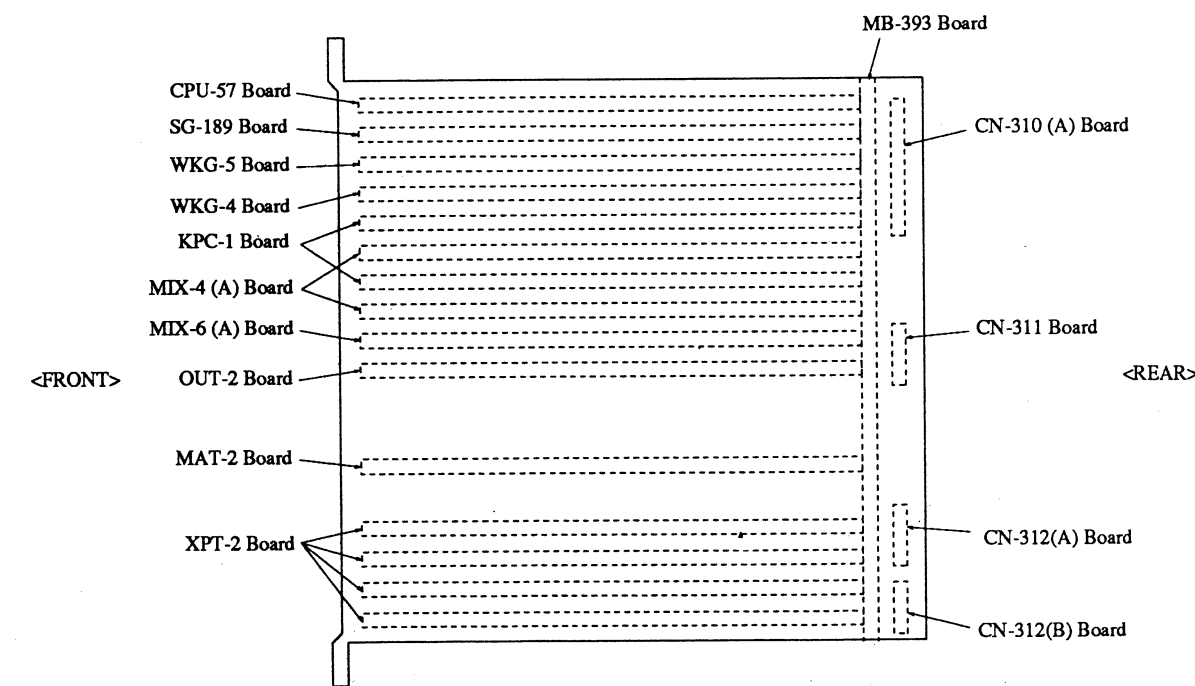


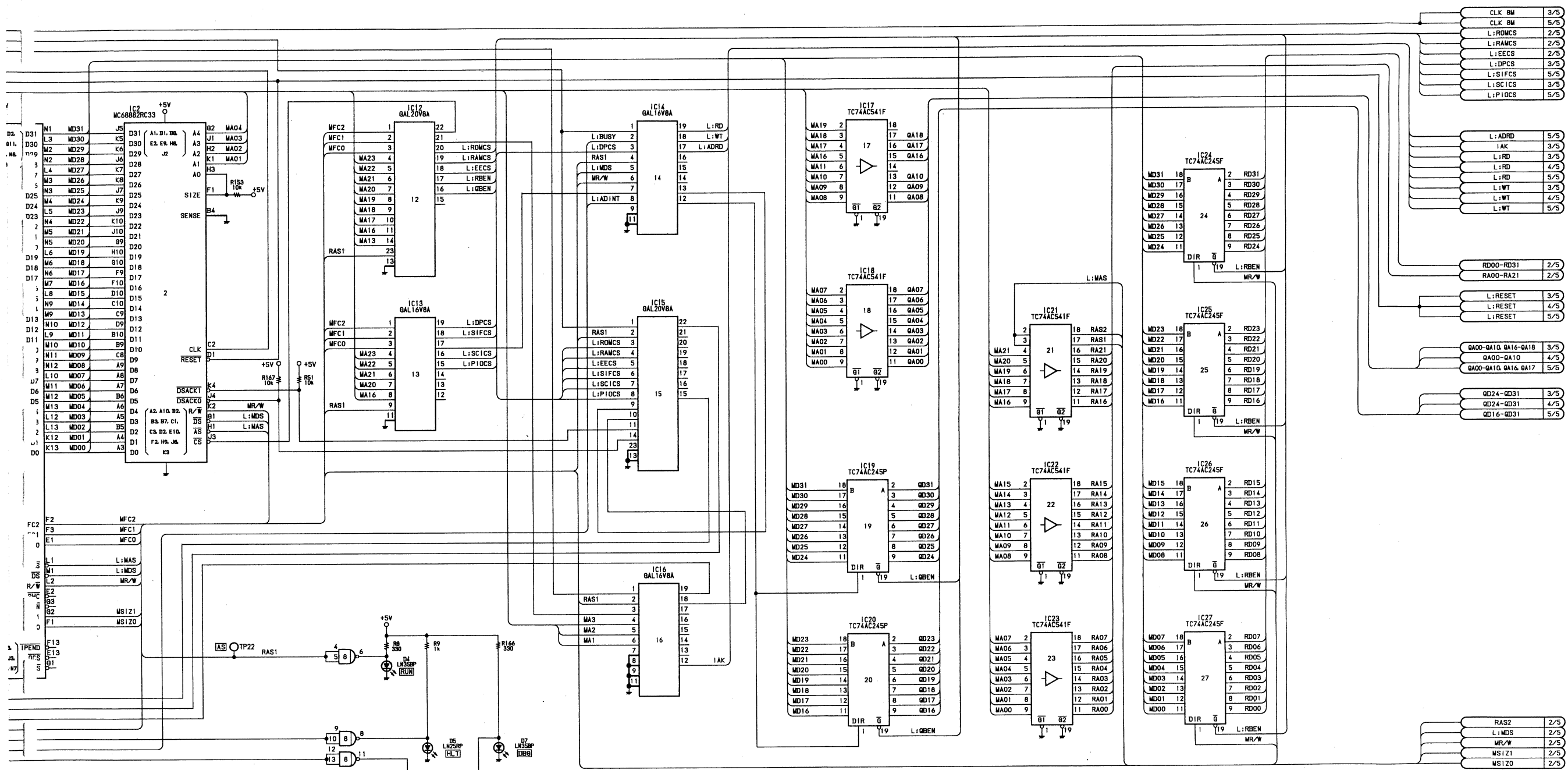
Location of the Printed Circuit Boards

<Power Unit: Top View>



<Main Unit Chassis: Top View>

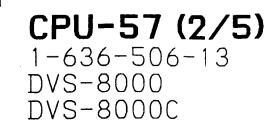




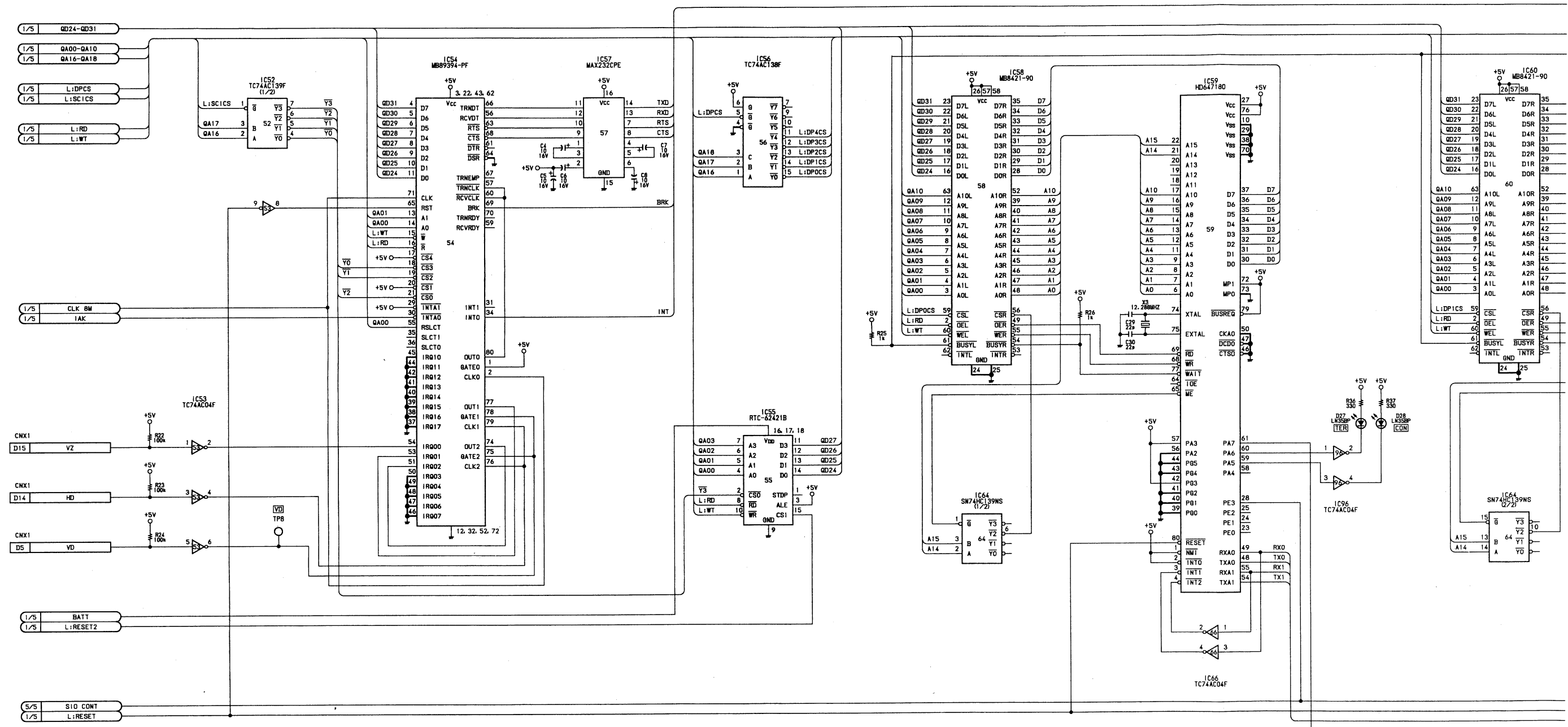
CPU-57 (1/5)
1-636-506-13
DVS-8000
DVS-8000C

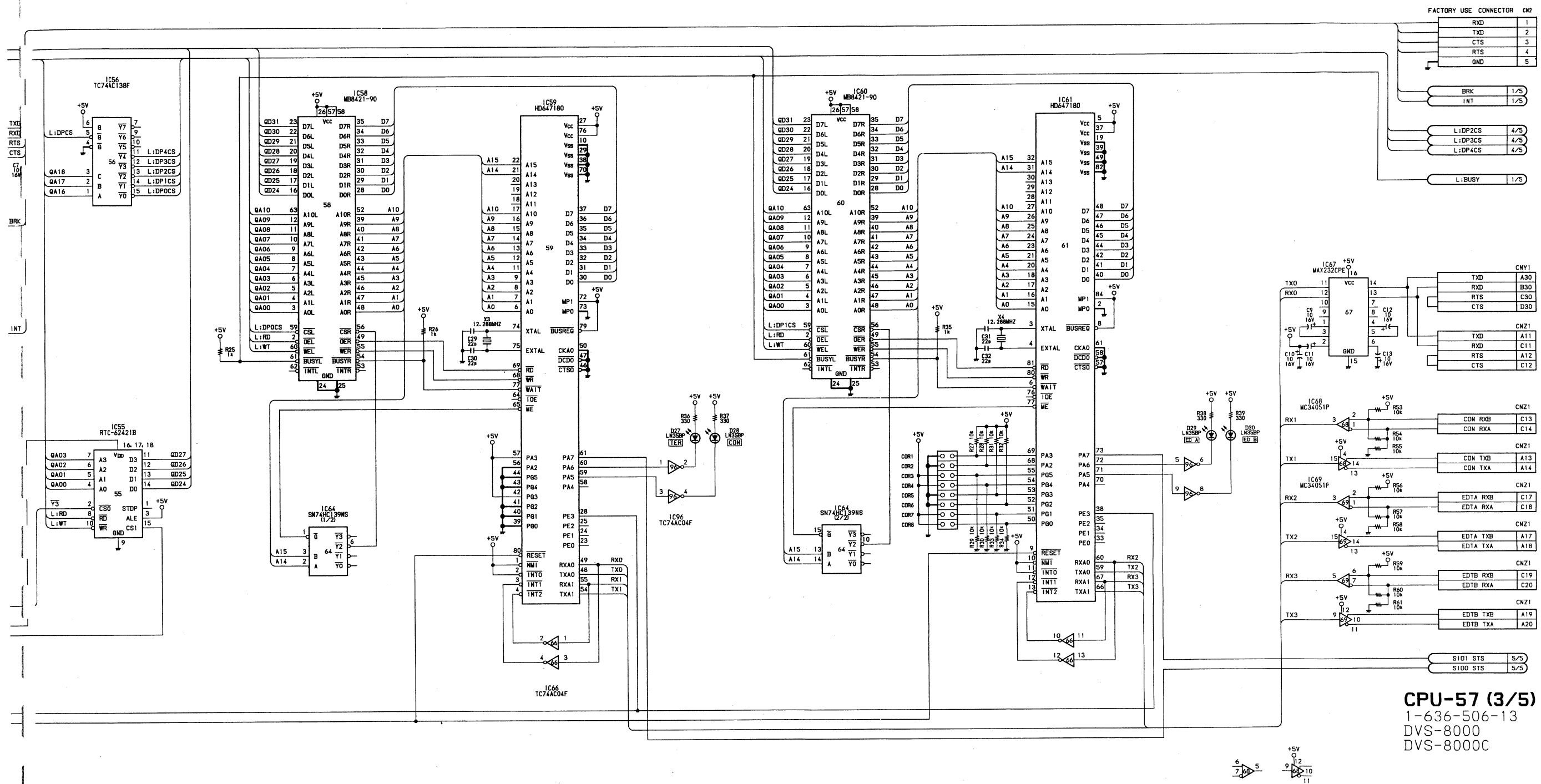
5





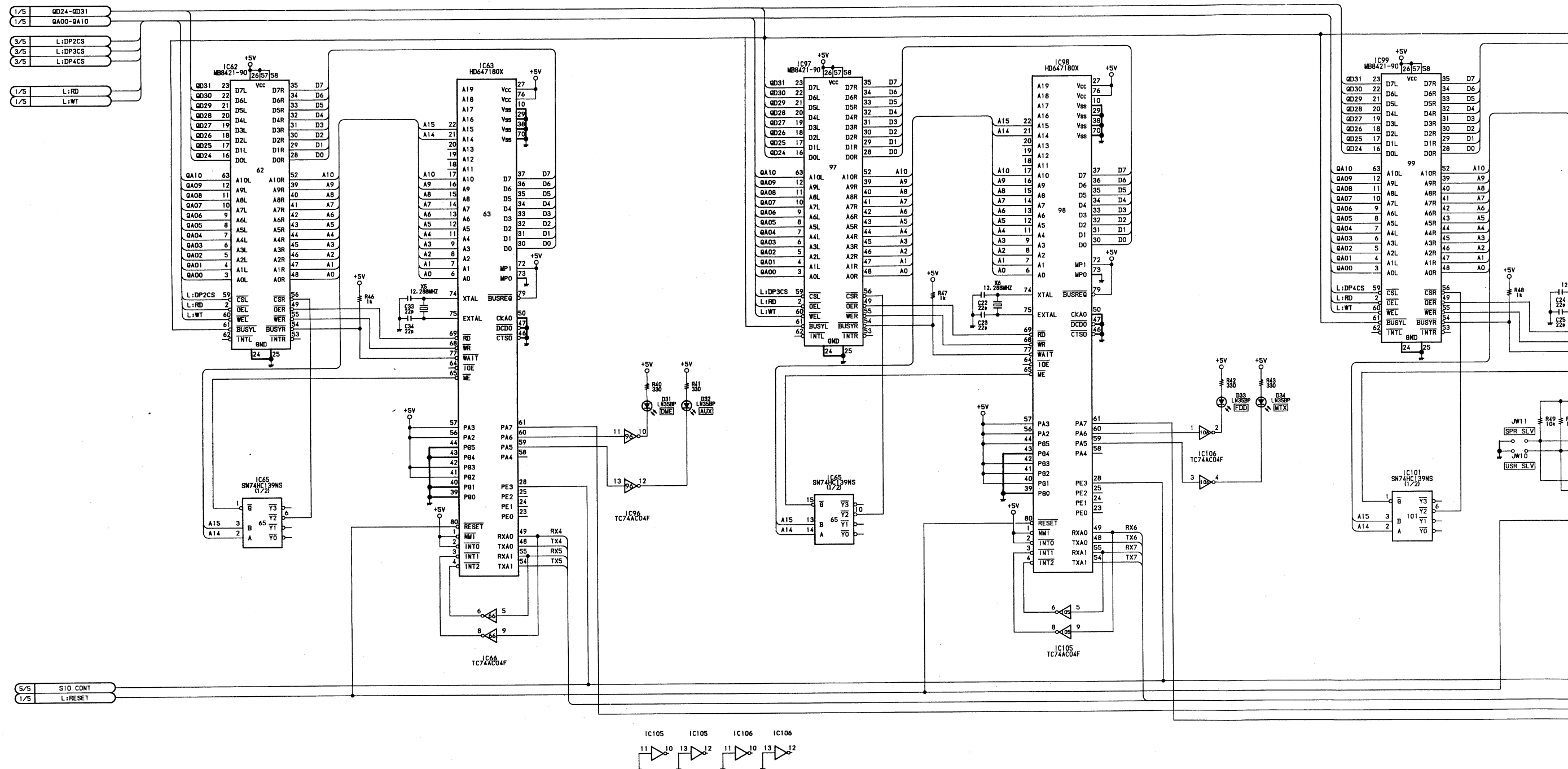
CPU-57 CPU BOARD

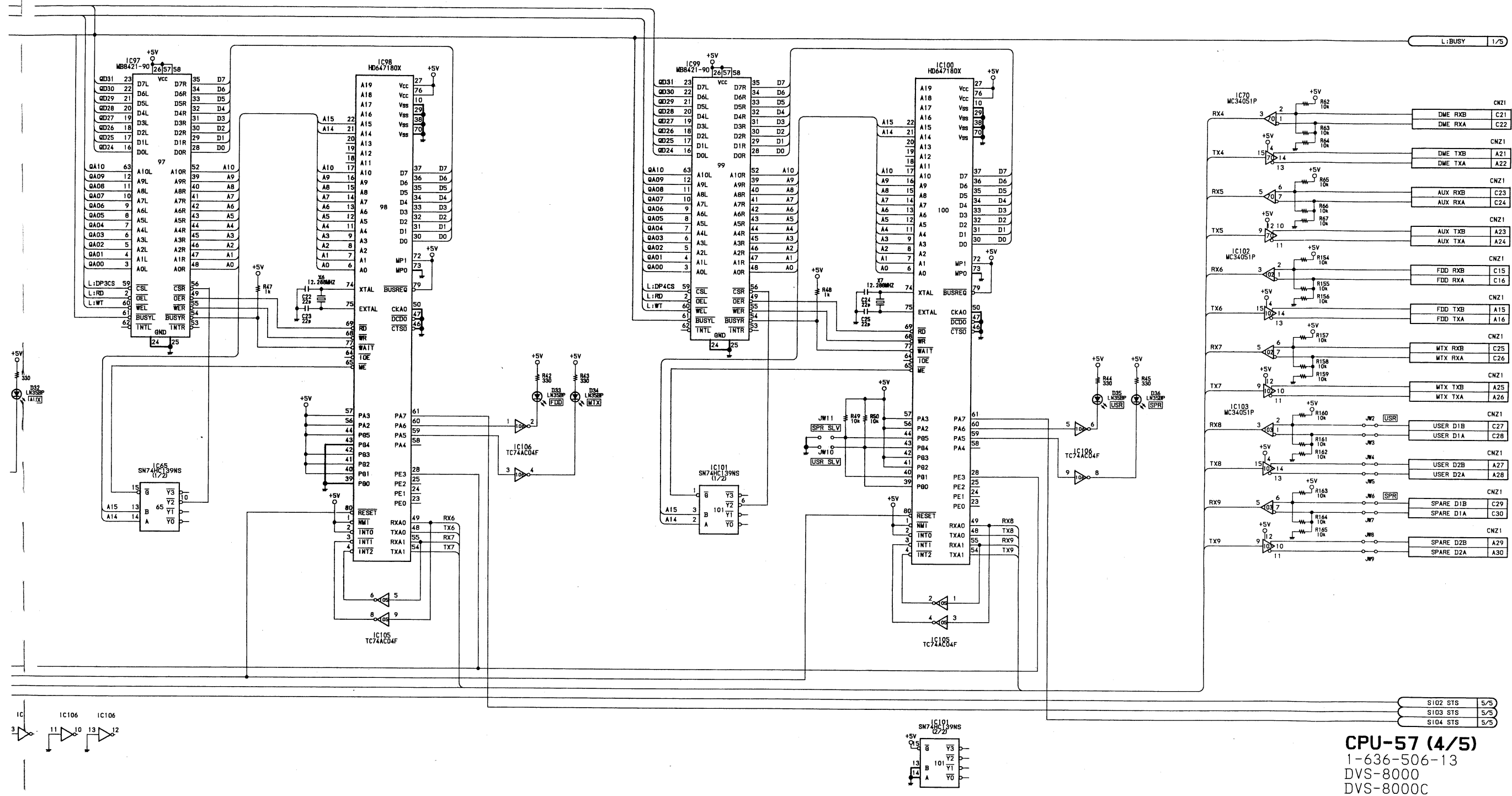


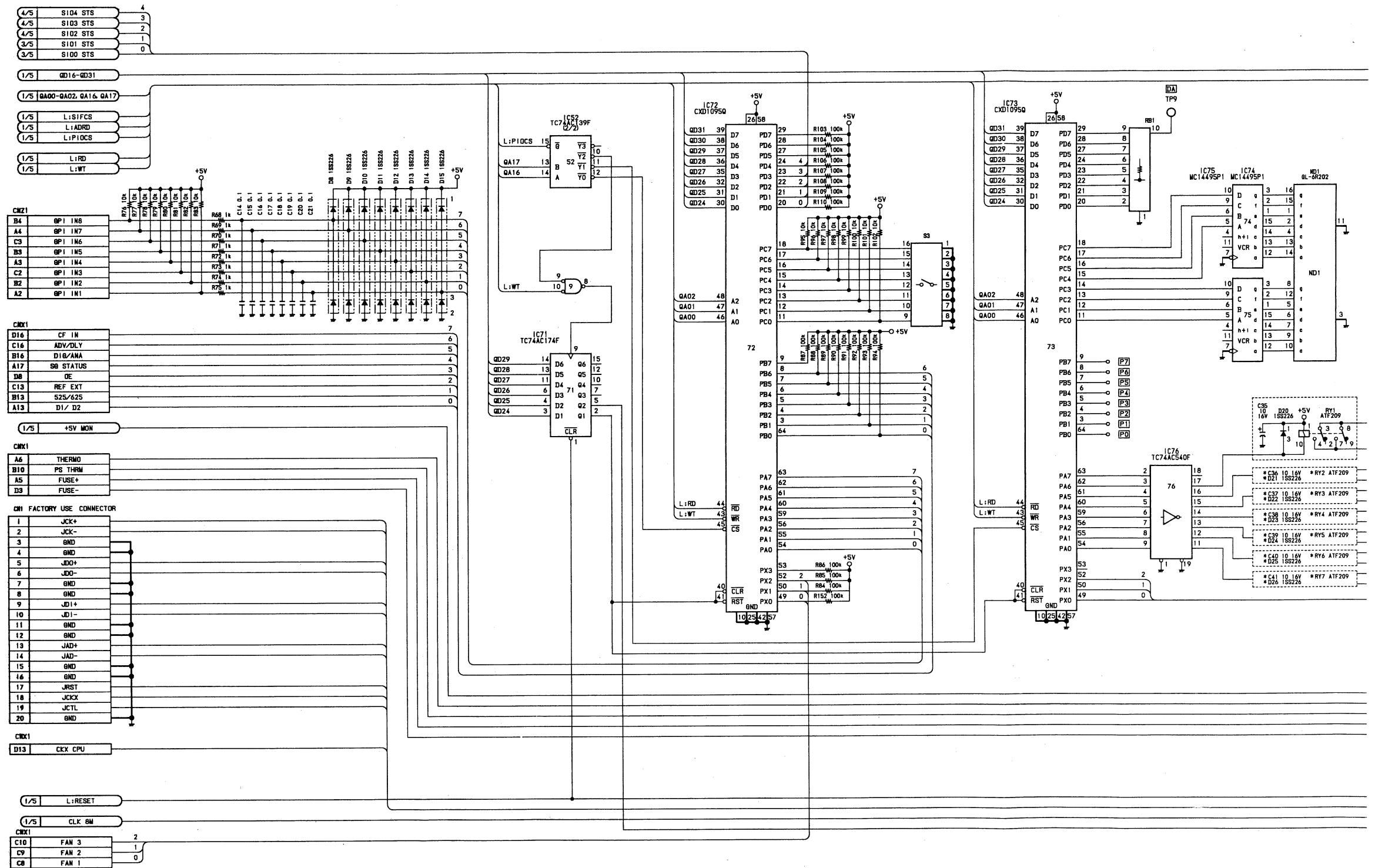


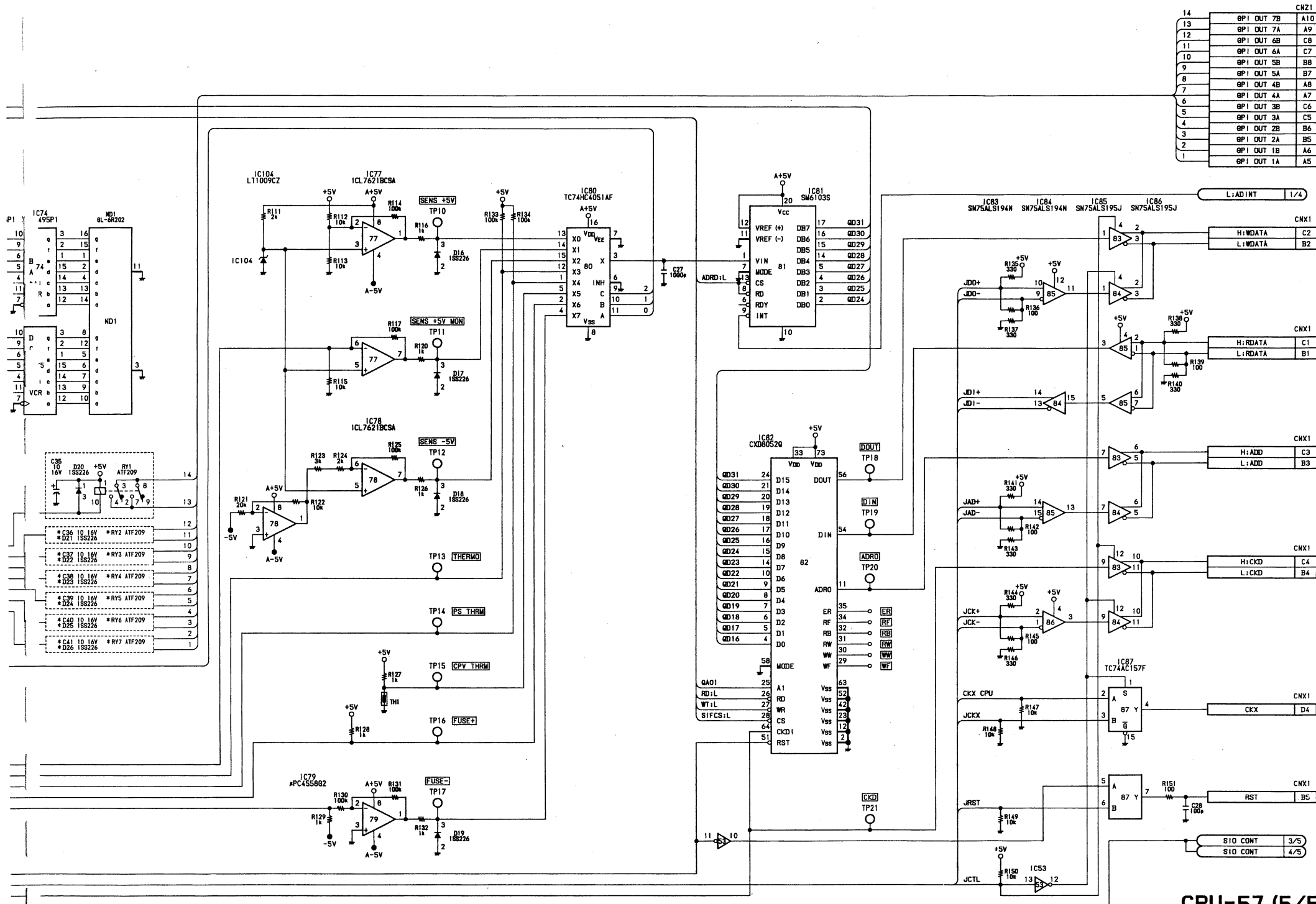
CPU-57 (3/5)
 1-636-506-13
 DVS-8000
 DVS-8000C

CPU-57 CPU BOARD









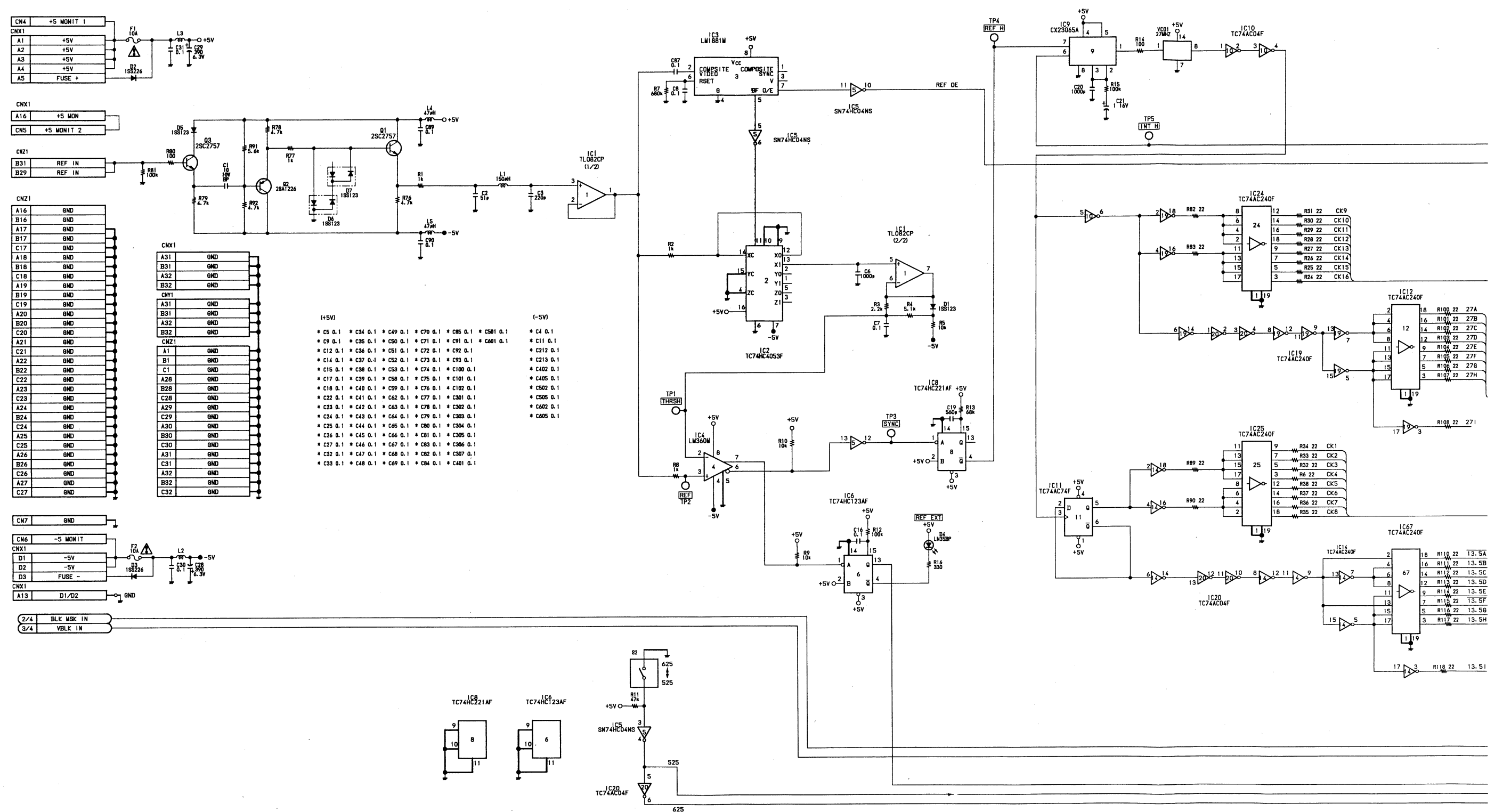
CPU-57 (5/5)

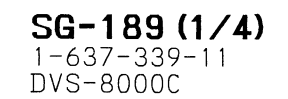
1-636-506-13

DVS-8000

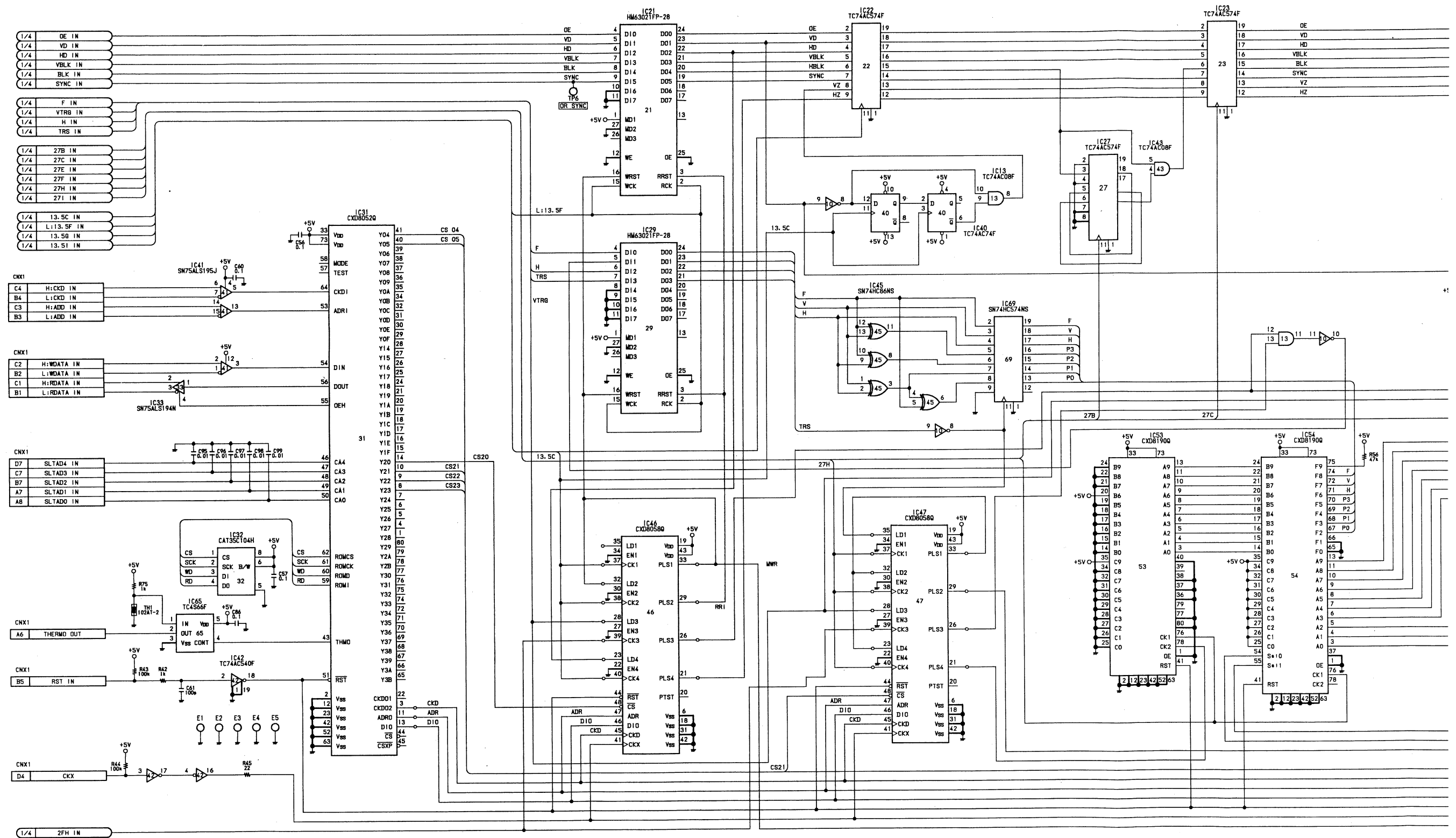
DVS-8000C

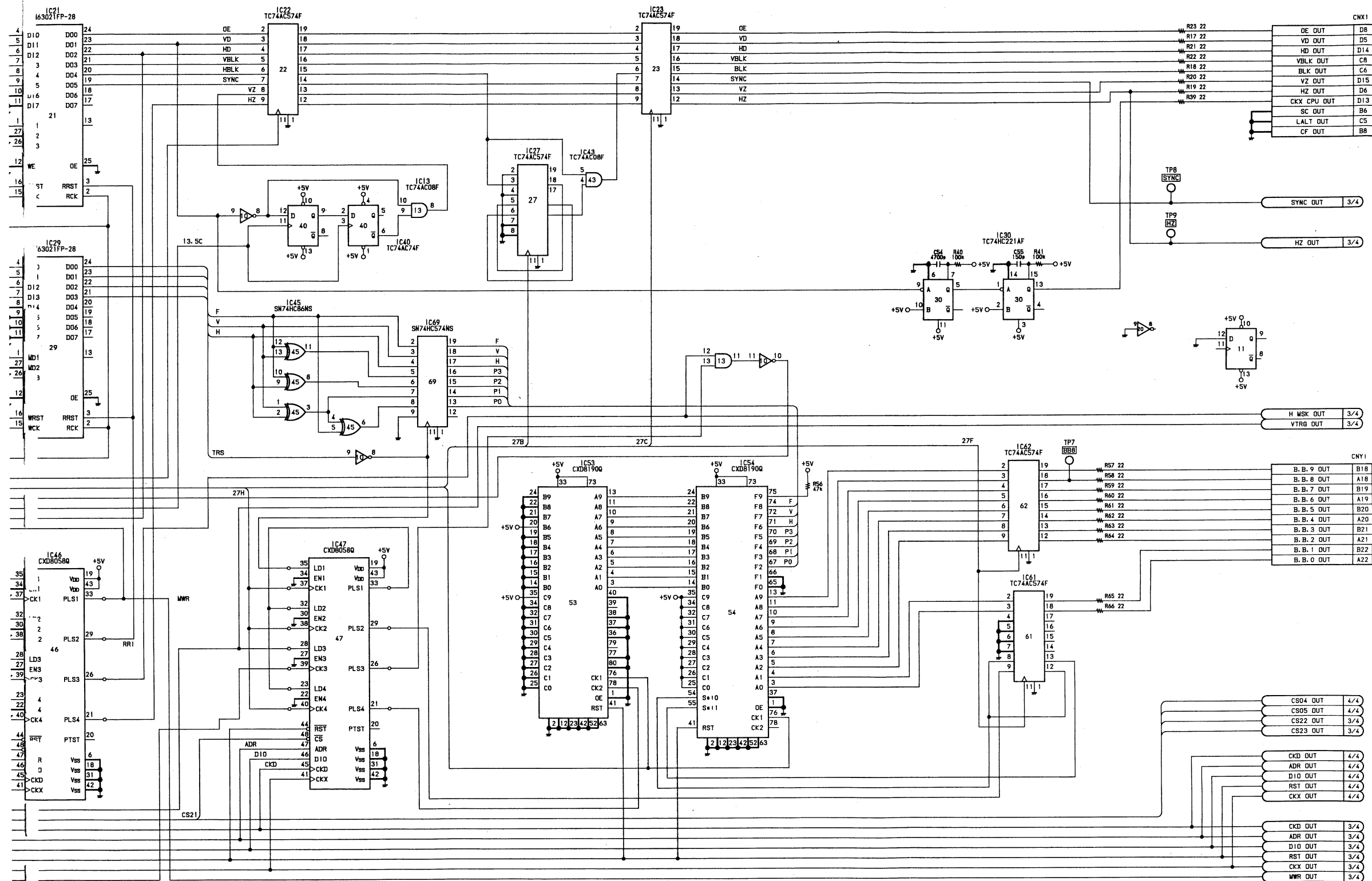
SG-189 SYNC GENERATOR BOARD





SG-189 SYNC GENERATOR BOARD

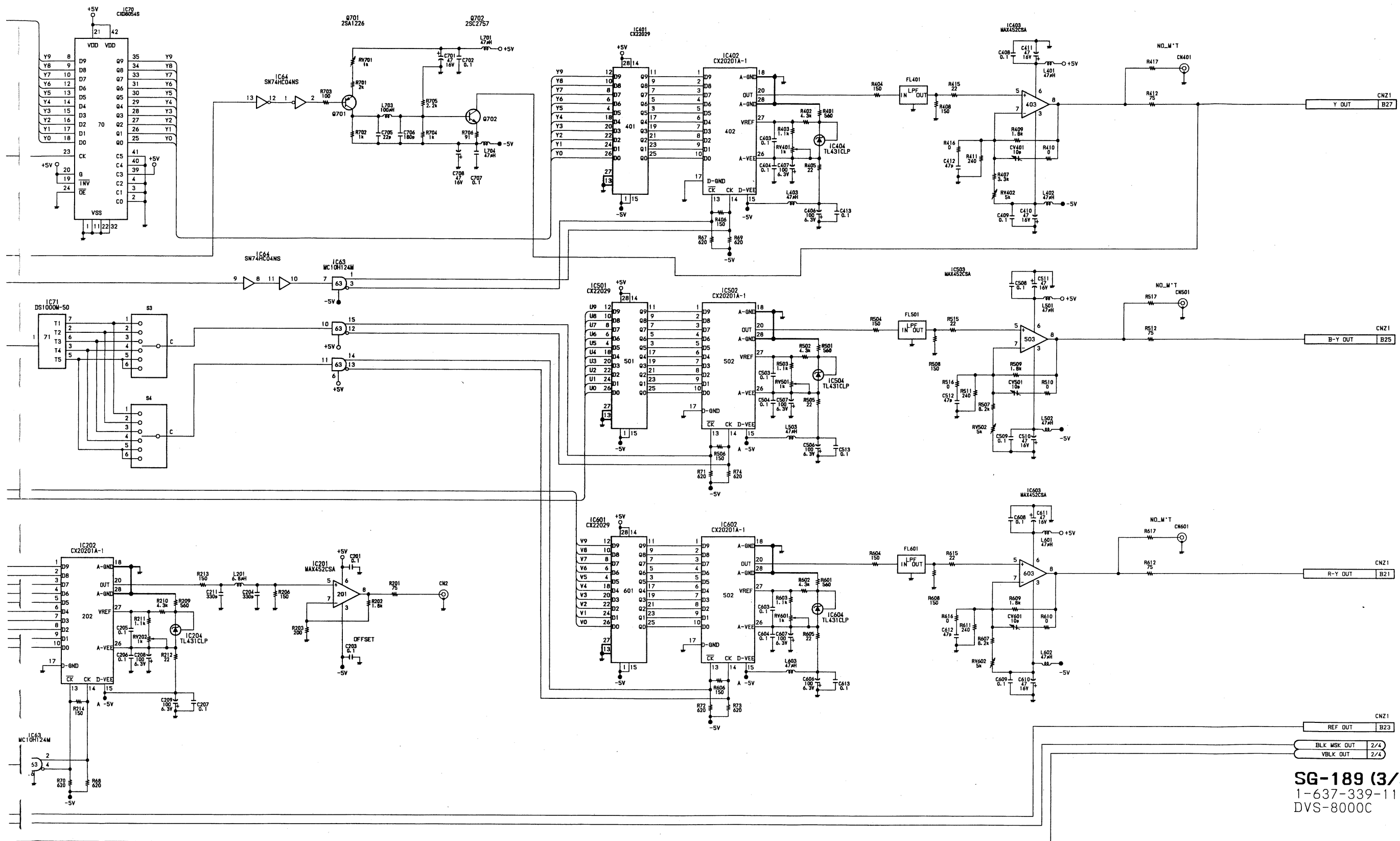




SG-189 (2/4)
1-637-339-11
DVS-8000C

SYX121-SG189A#3





SG-189 (3/4)
 1-637-339-11
 DVS-8000C

SG-189 SYNC GENERATOR BOARD

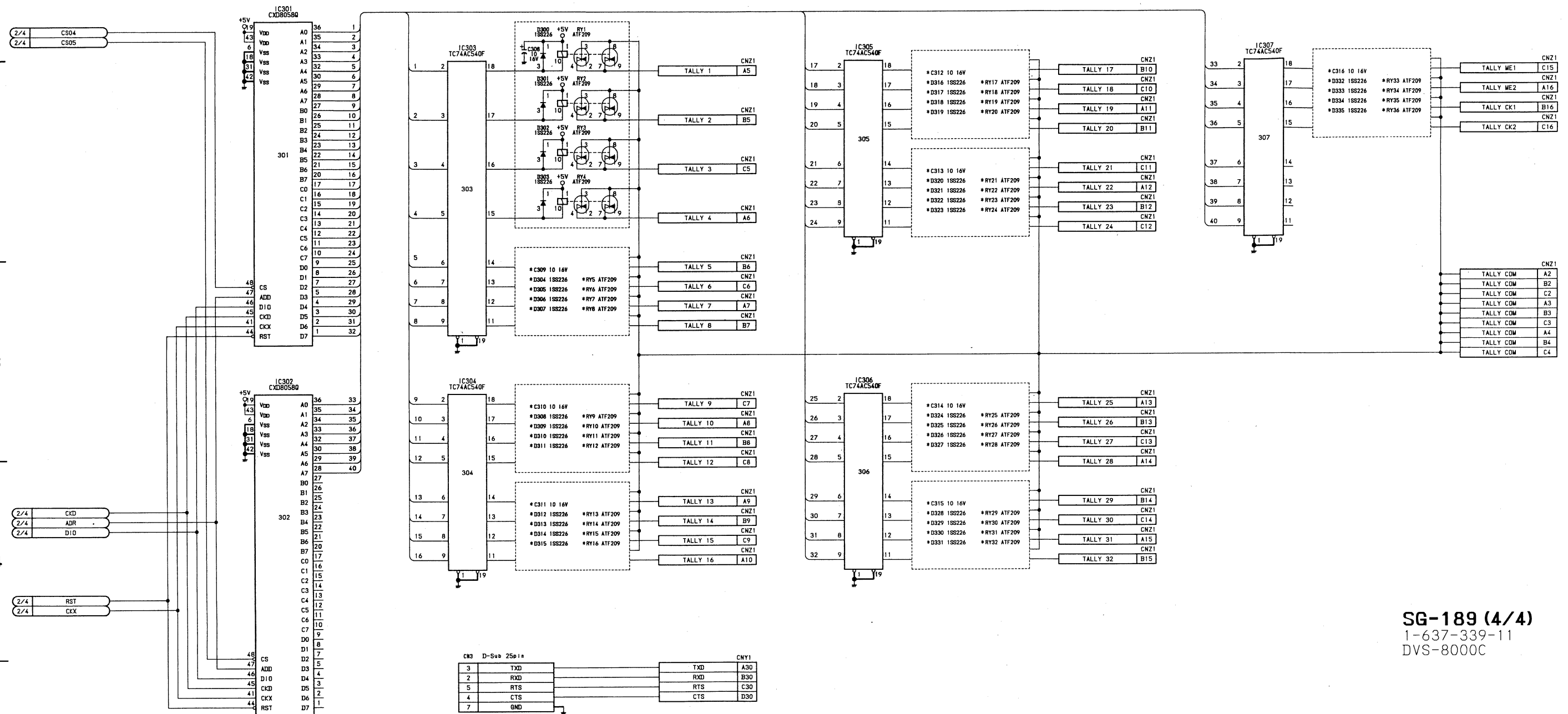
1

2

3

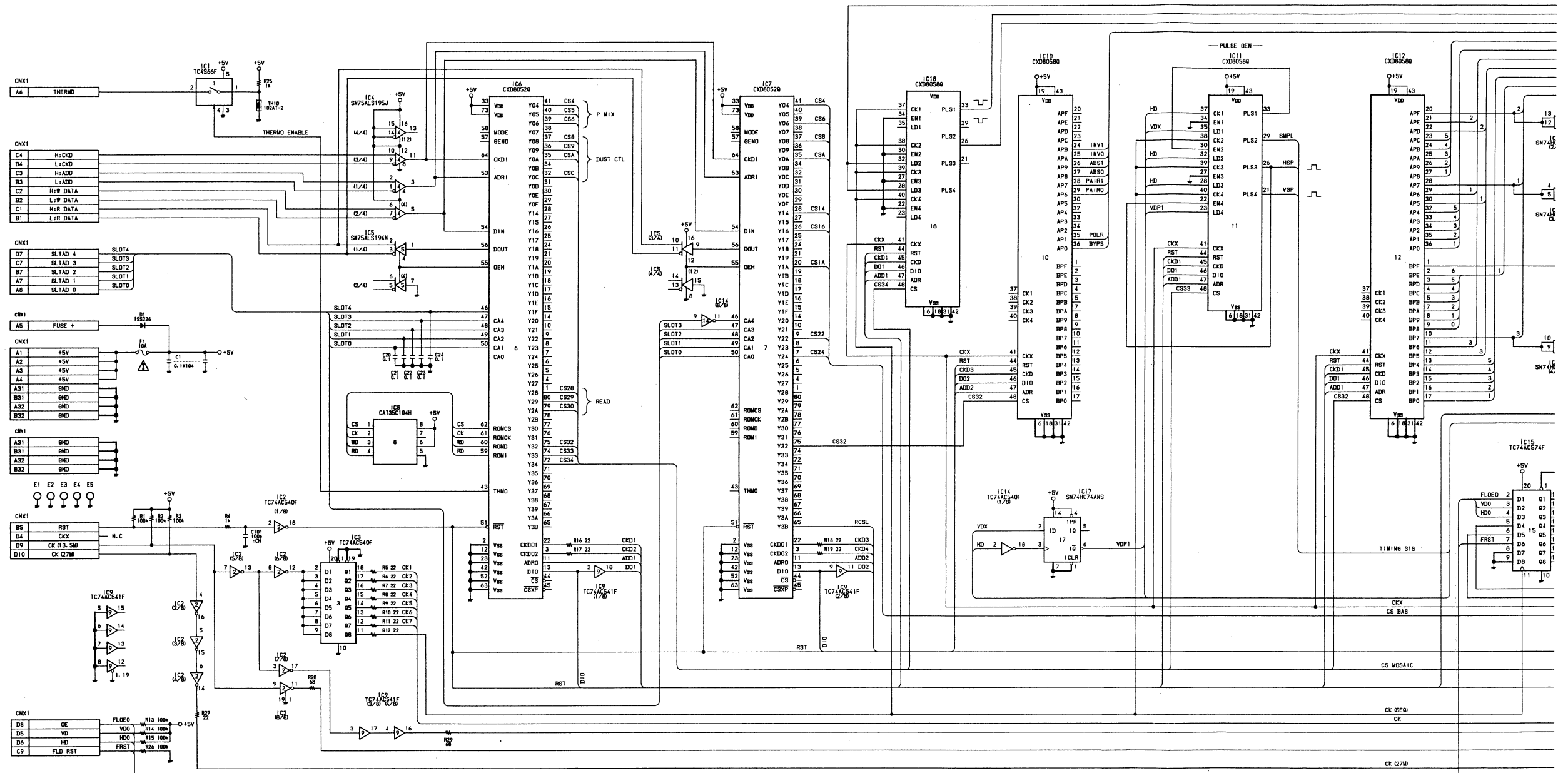
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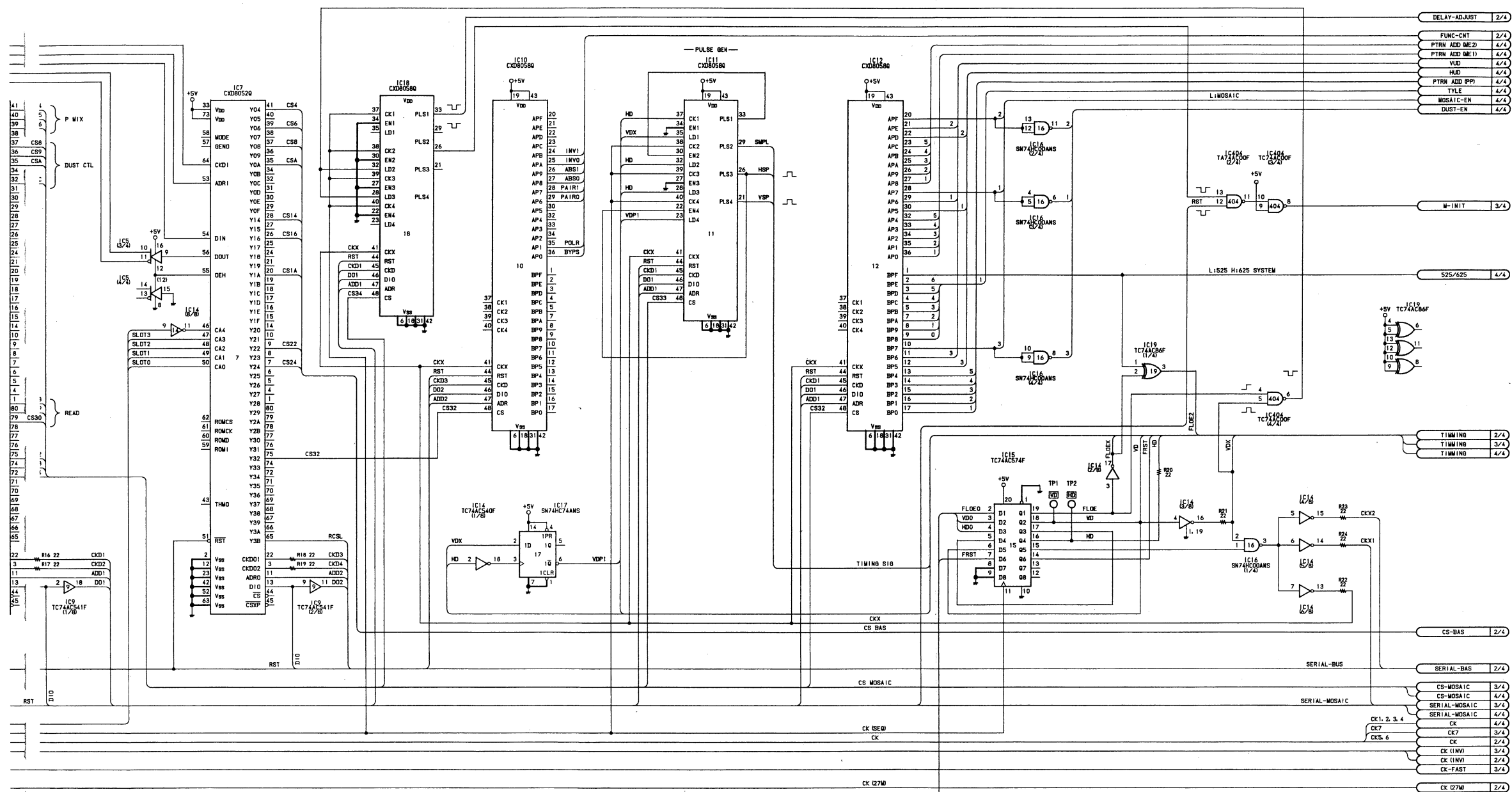


SG-189 (4/4)
1-637-339-11
DVS-8000C

WKG-5 ENHANCED WIPE BOARD

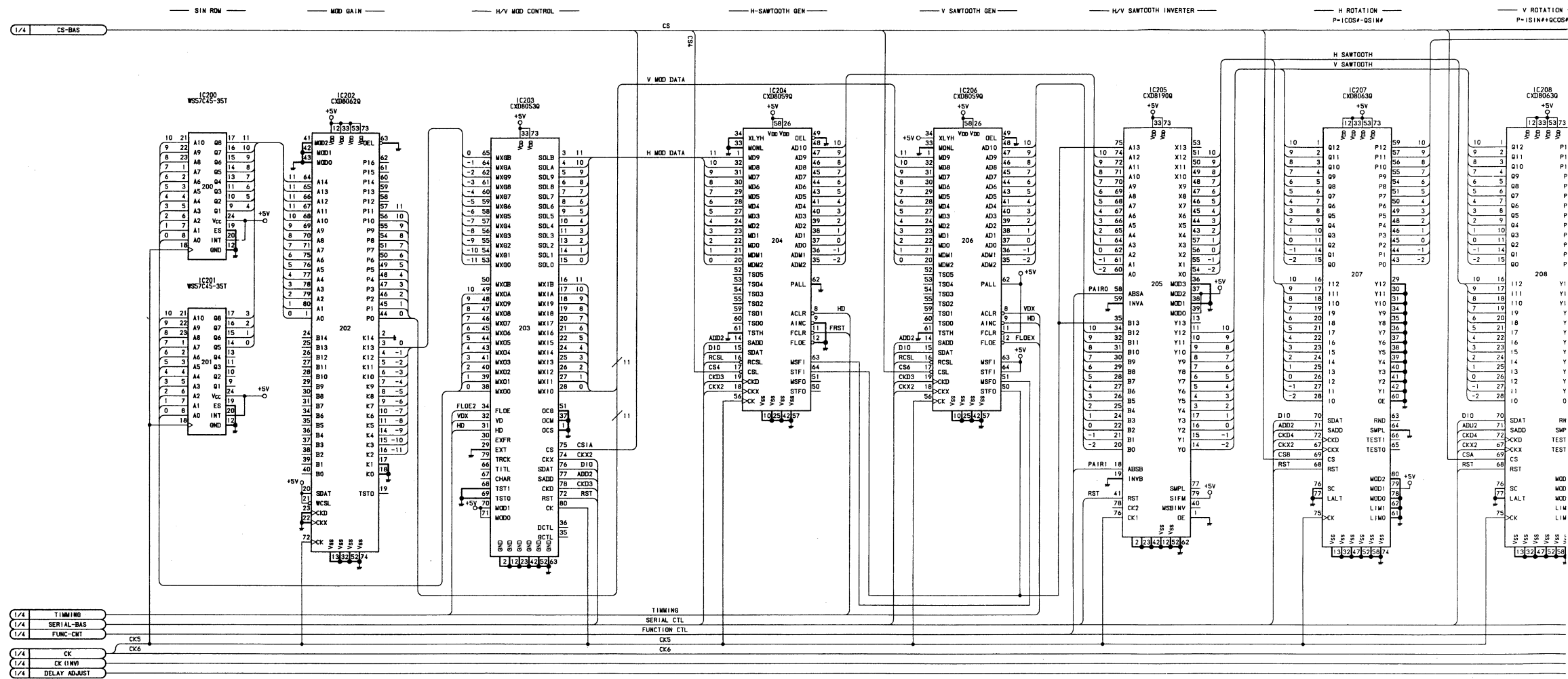


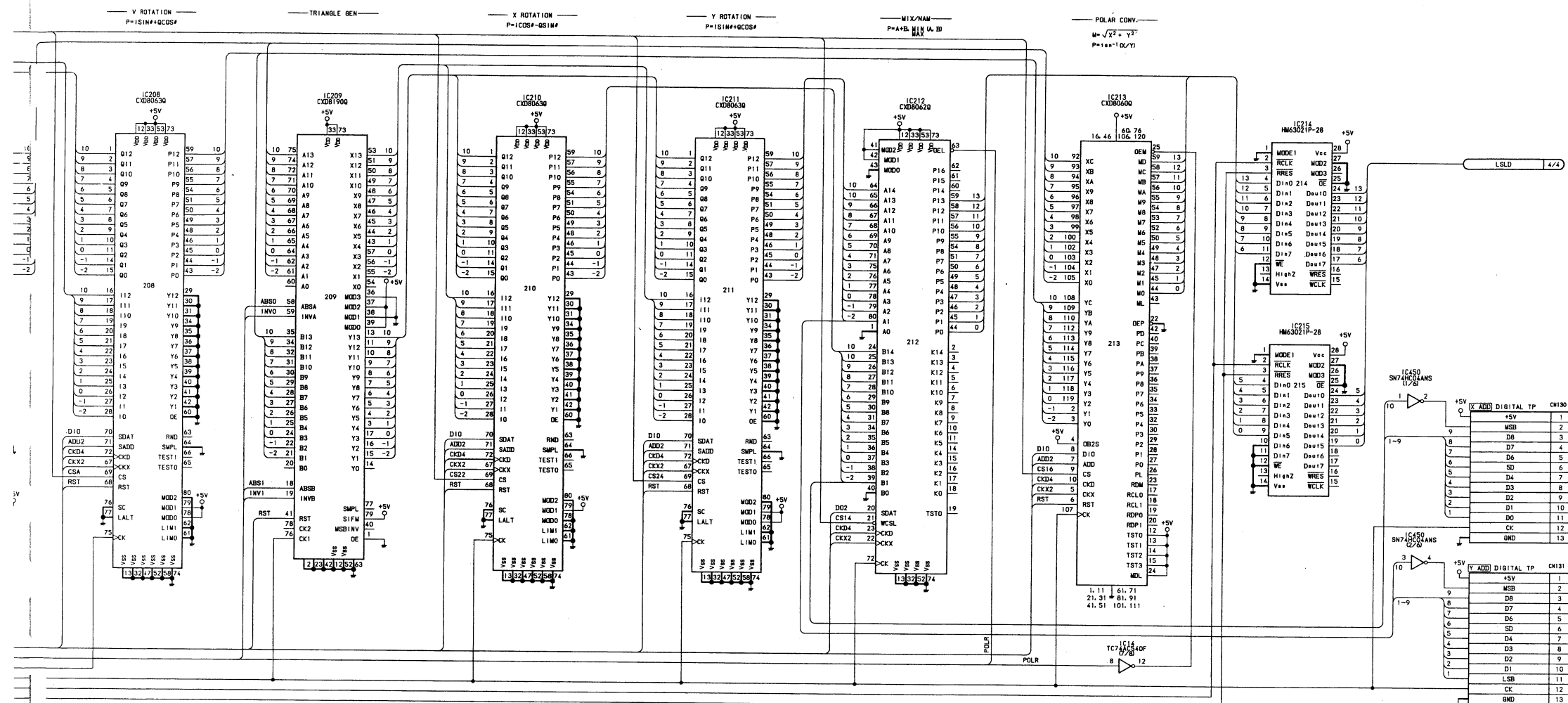
*C1 0.1 *C7 0.1 *C14 0.1 *C200 0.1 *C206 0.1 *C212 0.1 *C200 0.1 *C206 0.1 *C212 0.1 *C401 0.1 *
*C2 0.1 *C8 0.1 *C15 0.1 *C207 0.1 *C213 0.1 *C207 0.1 *C213 0.1 *C402 0.1 *
*C3 0.1 *C9 0.1 *C16 0.1 *C202 0.1 *C208 0.1 *C214 0.1 *C202 0.1 *C208 0.1 *C403 0.1 *
*C4 0.1 *C10 0.1 *C17 0.1 *C203 0.1 *C209 0.1 *C215 0.1 *C203 0.1 *C209 0.1 *C404 0.1 *
*C5 0.1 *C11 0.1 *C18 0.1 *C204 0.1 *C210 0.1 *C216 0.1 *C204 0.1 *C210 0.1 *C405 0.1 *
*C6 0.1 *C12 0.1 *C19 0.1 *C205 0.1 *C211 0.1 *C217 0.1 *C205 0.1 *C211 0.1 *C406 0.1 *



IC1 0.1 *IC2 0.1 *IC3 0.1 *IC4 0.1 *IC5 0.1 *IC6 0.1 *IC7 0.1 *IC8 0.1 *IC9 0.1 *IC10 0.1 *IC11 0.1 *IC12 0.1 *IC13 0.1 *IC14 0.1 *IC15 0.1 *IC16 0.1 *IC17 0.1 *IC18 0.1 *IC19 0.1 *IC20 0.1 *IC21 0.1 *IC22 0.1 *IC23 0.1 *IC24 0.1 *IC25 0.1 *IC26 0.1 *IC27 0.1 *IC28 0.1 *IC29 0.1 *IC30 0.1 *IC31 0.1 *IC32 0.1 *IC33 0.1 *IC34 0.1 *IC35 0.1 *IC36 0.1 *IC37 0.1 *IC38 0.1 *IC39 0.1 *IC40 0.1 *IC41 0.1 *IC42 0.1 *IC43 0.1 *IC44 0.1 *IC45 0.1 *IC46 0.1 *IC47 0.1 *IC48 0.1 *IC49 0.1 *IC50 0.1 *IC51 0.1 *IC52 0.1 *IC53 0.1 *IC54 0.1 *IC55 0.1 *IC56 0.1 *IC57 0.1 *IC58 0.1 *IC59 0.1 *IC60 0.1 *IC61 0.1 *IC62 0.1 *IC63 0.1 *IC64 0.1 *IC65 0.1 *IC66 0.1 *IC67 0.1 *IC68 0.1 *IC69 0.1 *IC70 0.1 *IC71 0.1 *IC72 0.1 *IC73 0.1 *IC74 0.1 *IC75 0.1 *IC76 0.1 *IC77 0.1 *IC78 0.1 *IC79 0.1 *IC80 0.1 *IC81 0.1 *IC82 0.1 *IC83 0.1 *IC84 0.1 *IC85 0.1 *IC86 0.1 *IC87 0.1 *IC88 0.1 *IC89 0.1 *IC90 0.1 *IC91 0.1 *IC92 0.1 *IC93 0.1 *IC94 0.1 *IC95 0.1 *IC96 0.1 *IC97 0.1 *IC98 0.1 *IC99 0.1 *IC100 0.1

WKG-5 (1/4)
1-636-509-13
DVS-8000
DVS-8000C





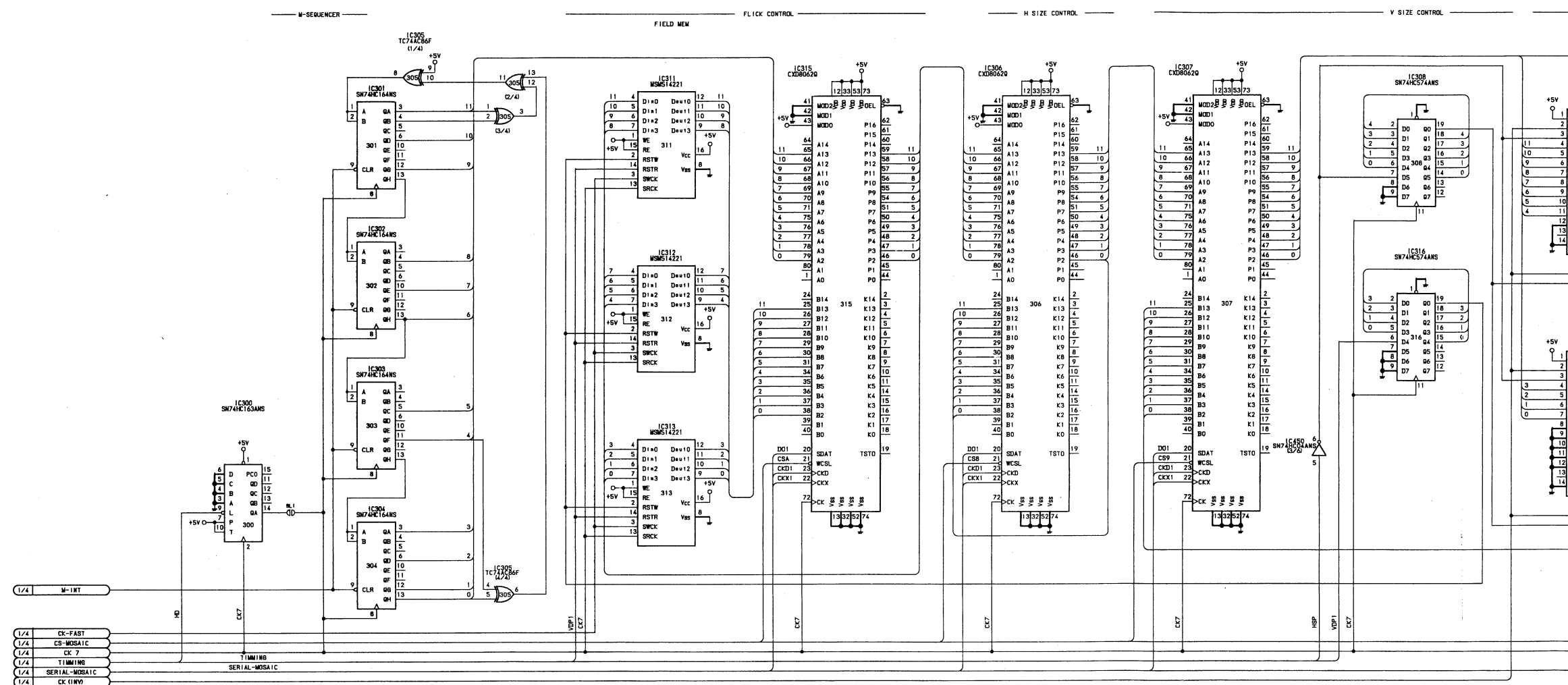
WKG-5 (2/4)

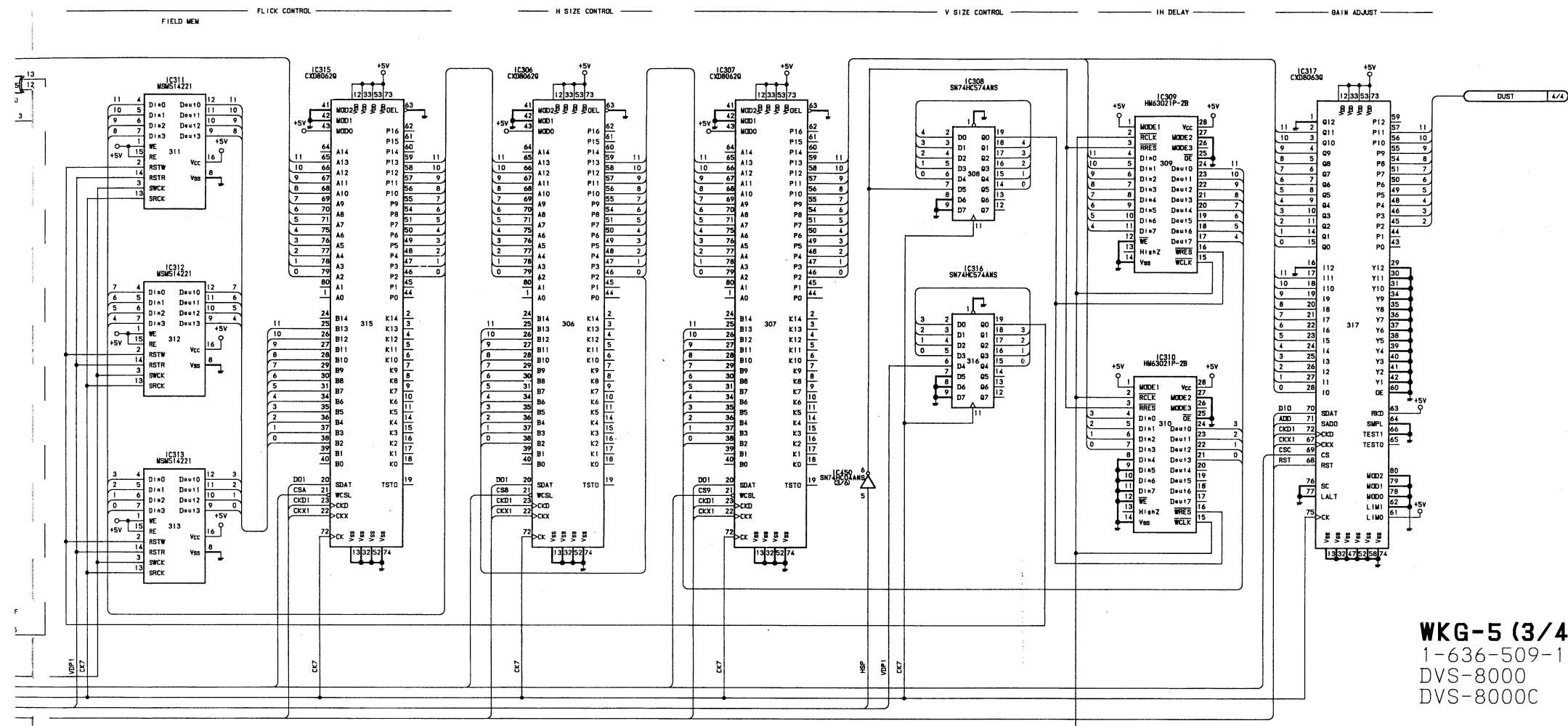
1-636-509-13

DVS-8000

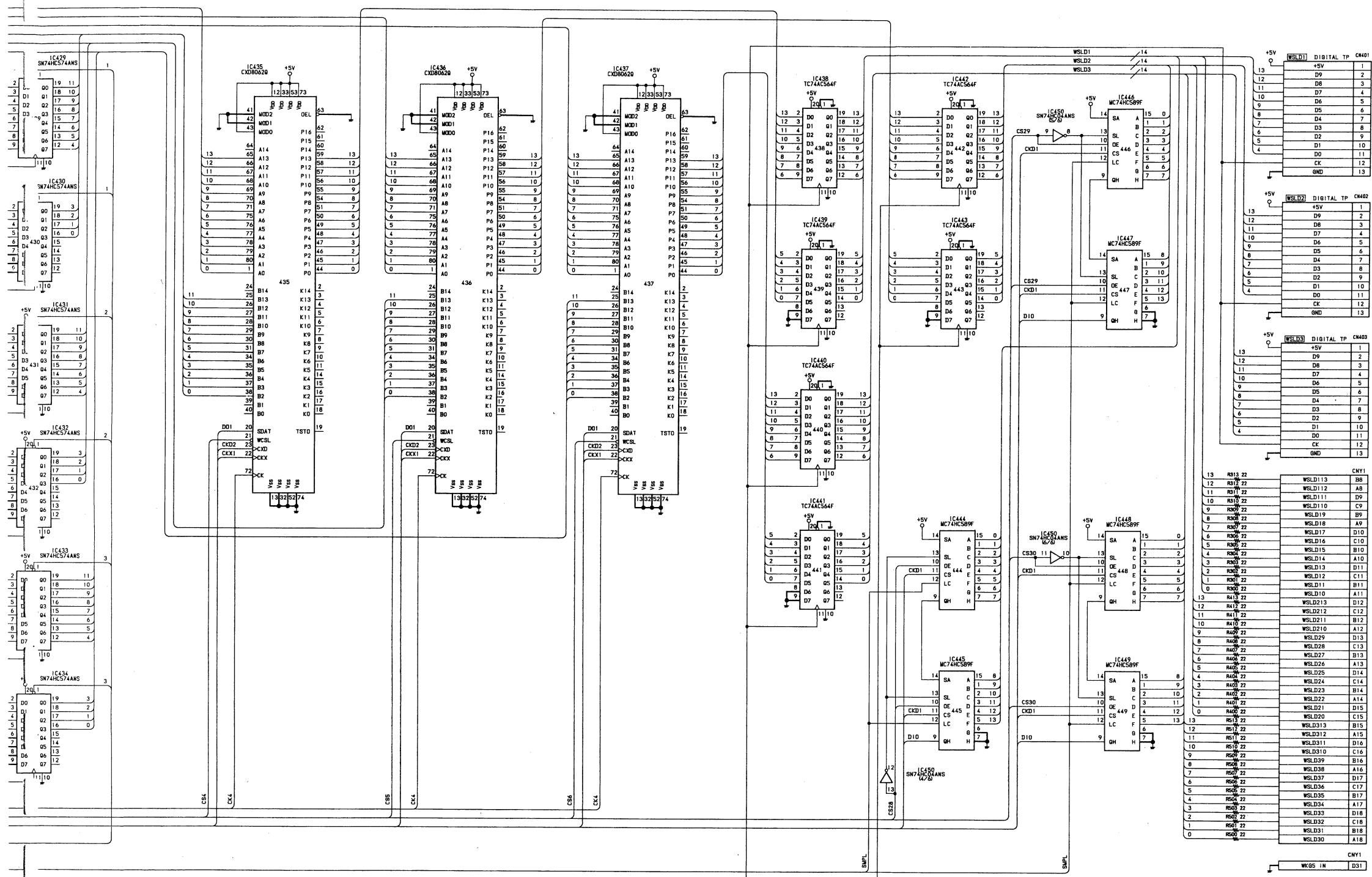
DVS-8000C

WKG-5 ENHANCED WIPE BOARD





WKG-5 (3/4)
1-636-509-13
DVS-8000
DVS-8000C



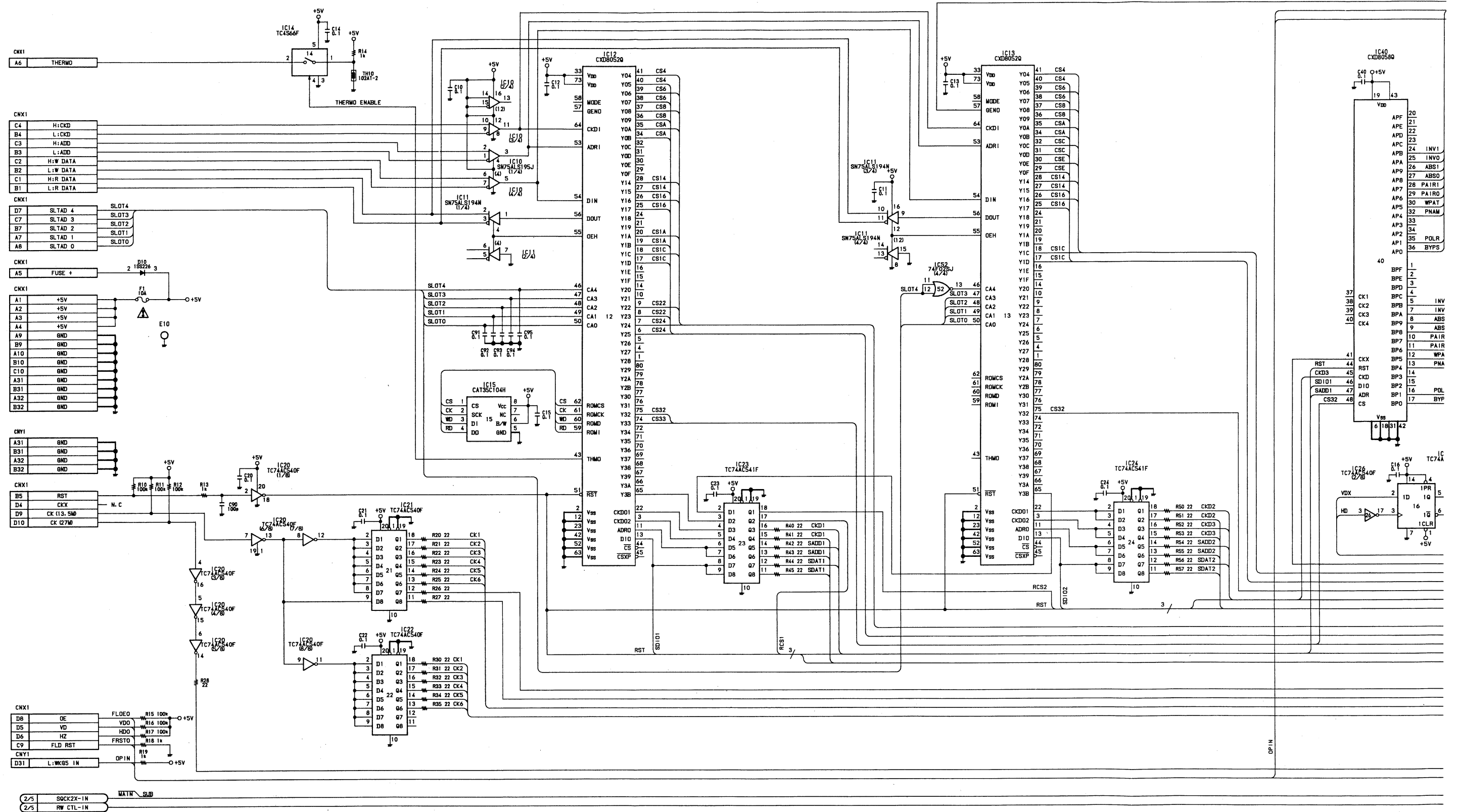
WKG-5 (4/4)

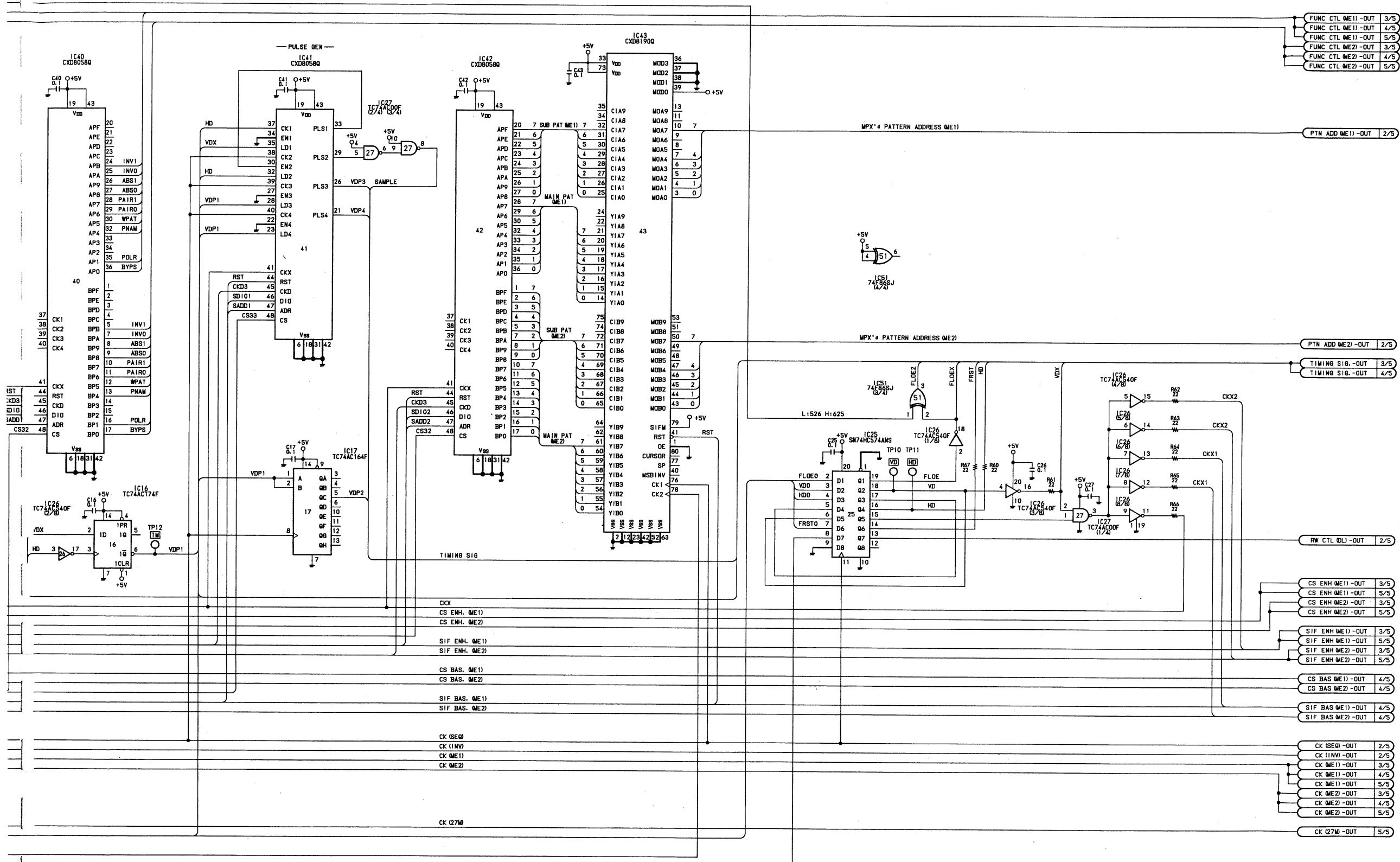
1-636-509-13

DVS-8000

DVS-8000C

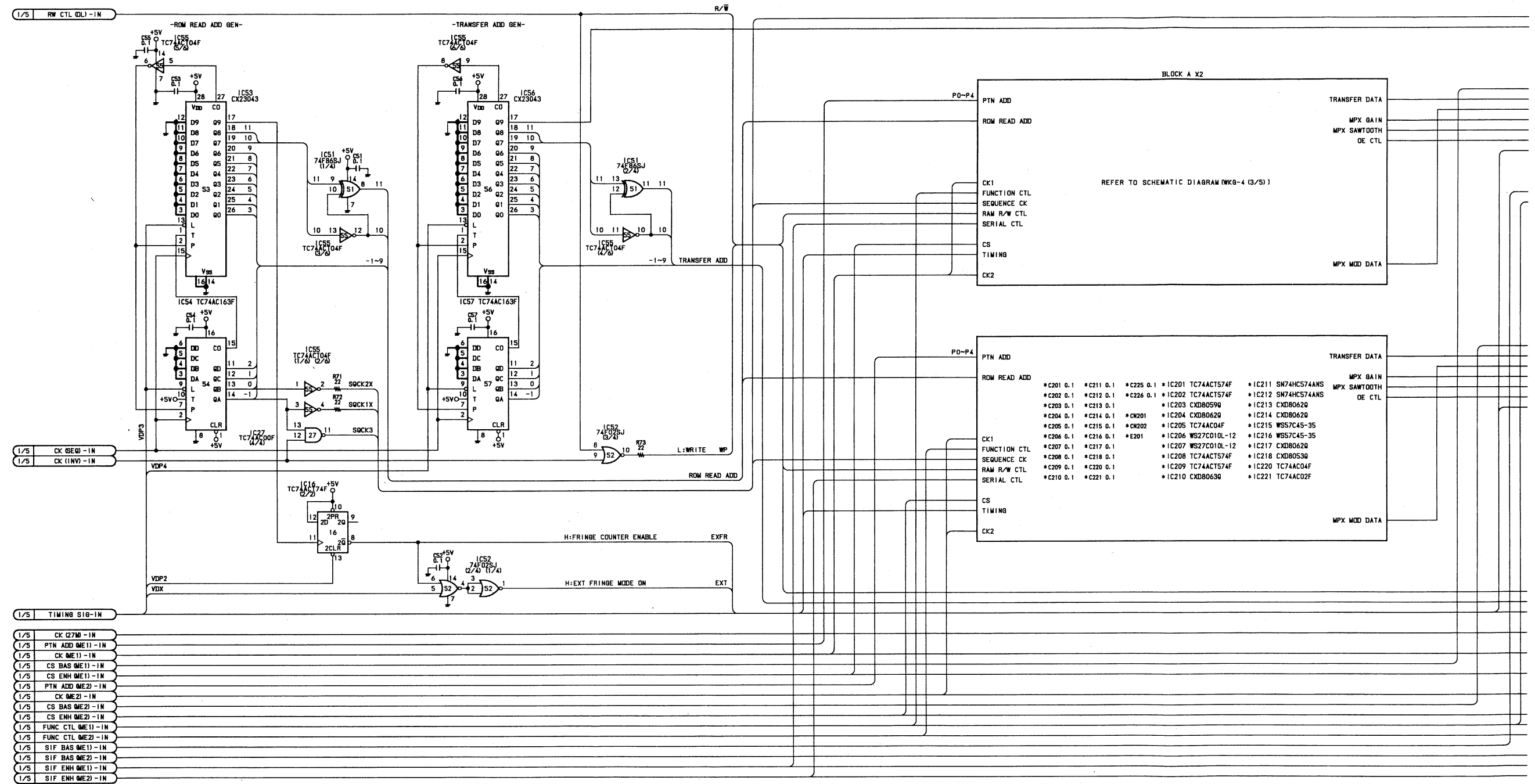
WKG-4 BASIC WIPE BOARD

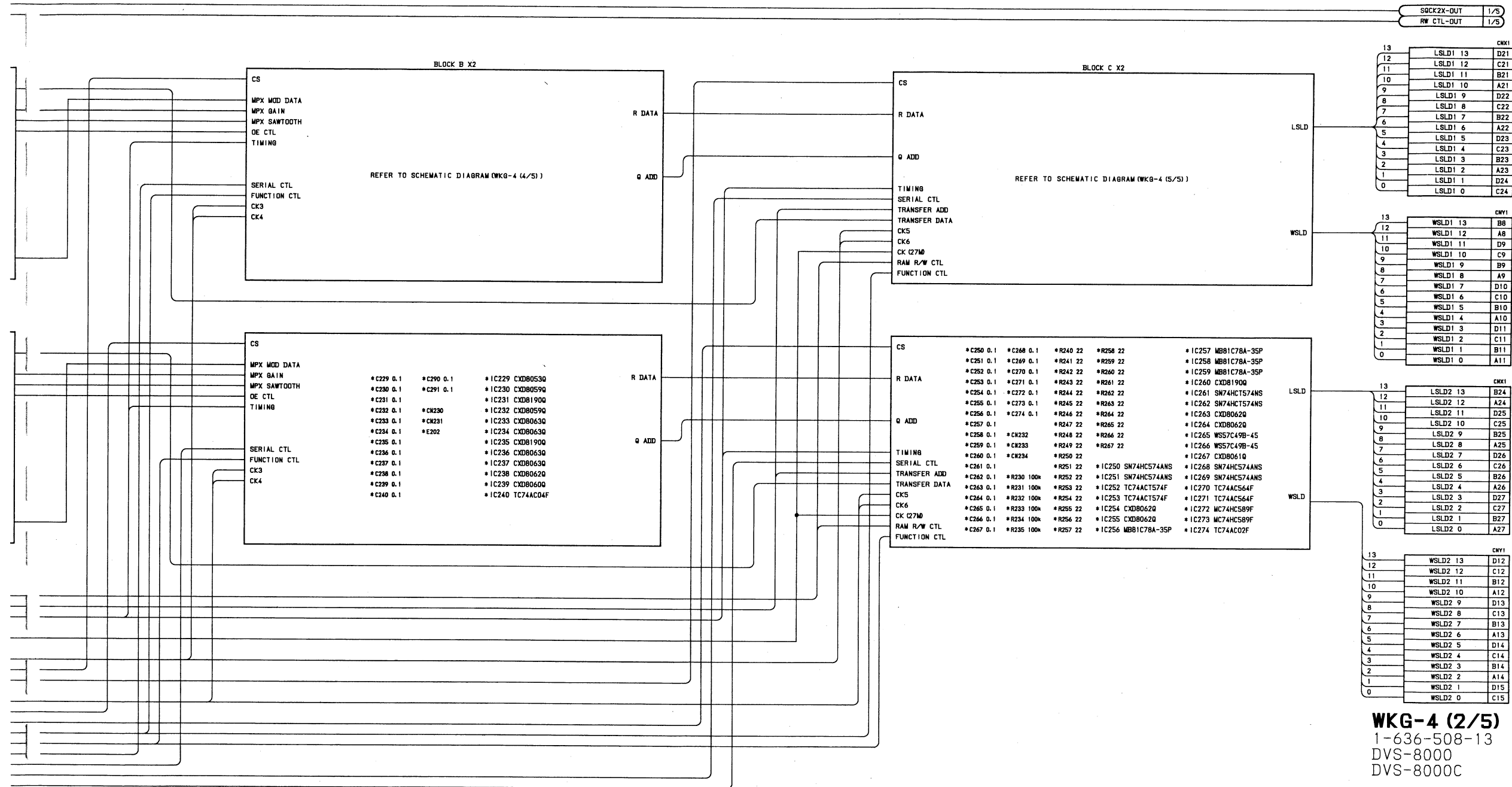




WKG-4 (1/5)
 1-636-508-13
 DVS-8000
 DVS-8000C

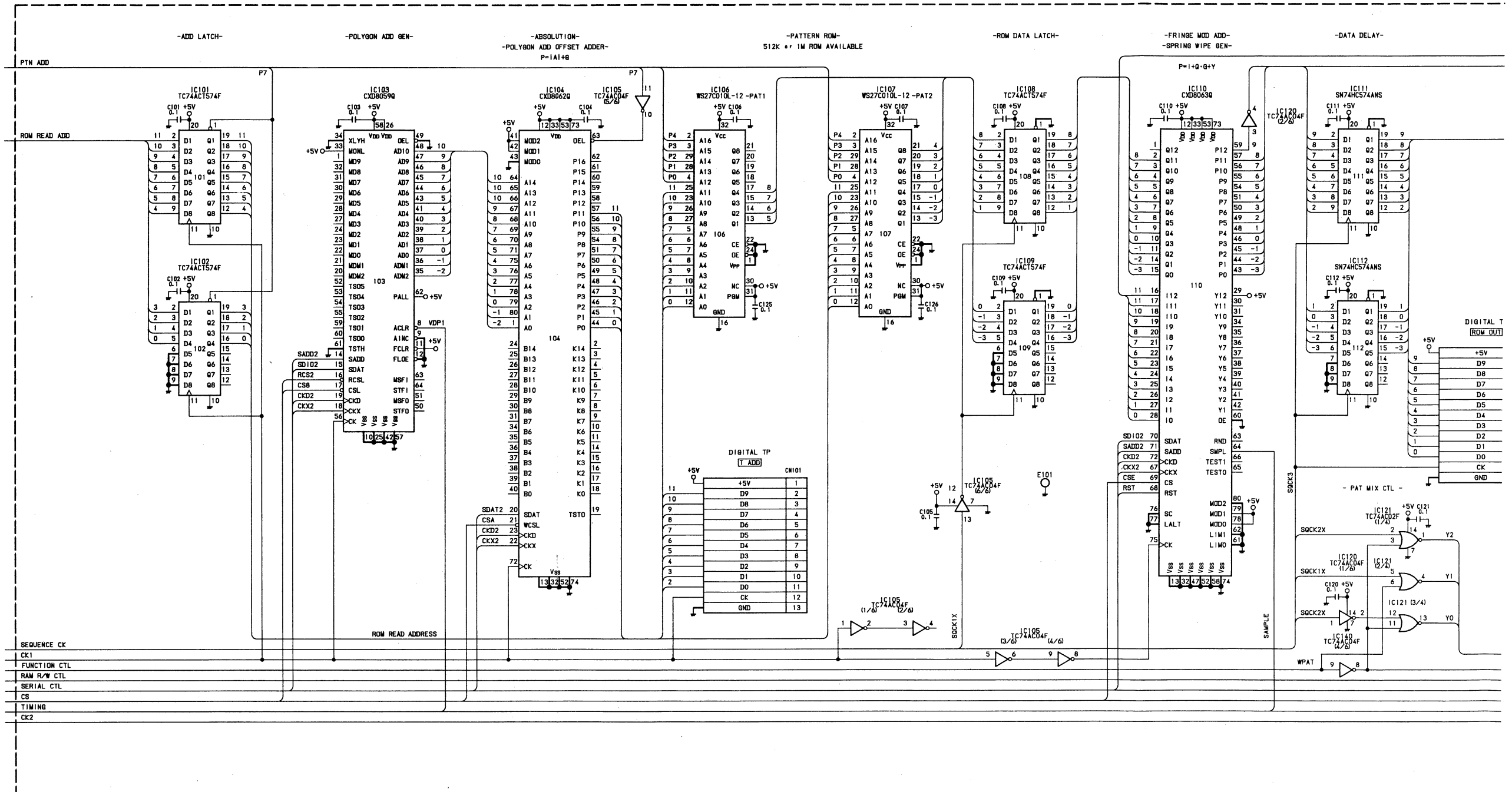
WKG-4 BASIC WIPE BOARD

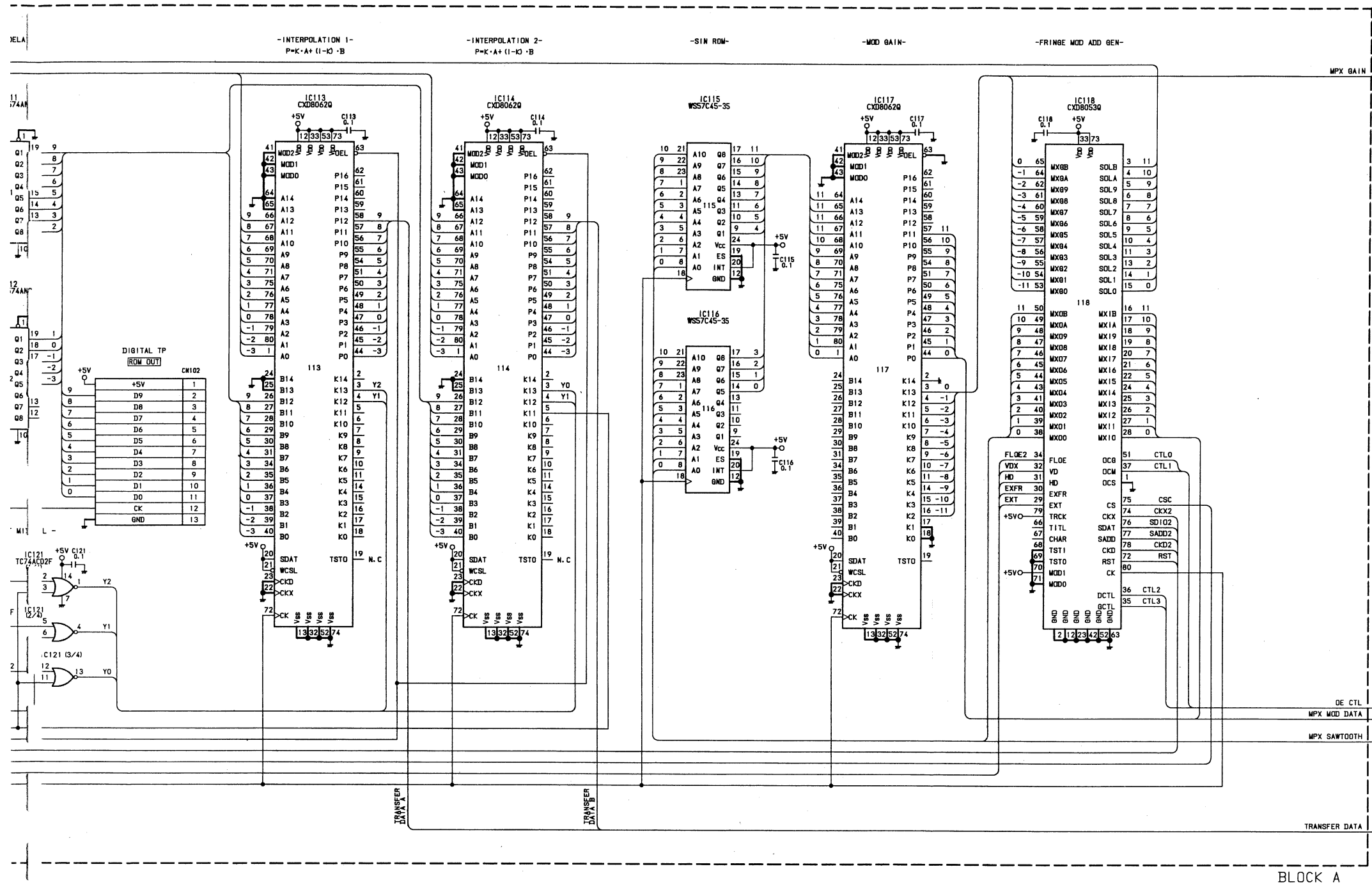




WKG-4 (2/5)
1-636-508-13
DVS-8000
DVS-8000C

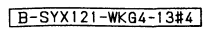
WKG-4 BASIC WIPE BOARD

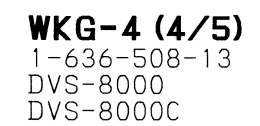




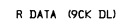
WKG-4 (3/5)
 1-636-508-13
 DVS-8000
 DVS-8000C

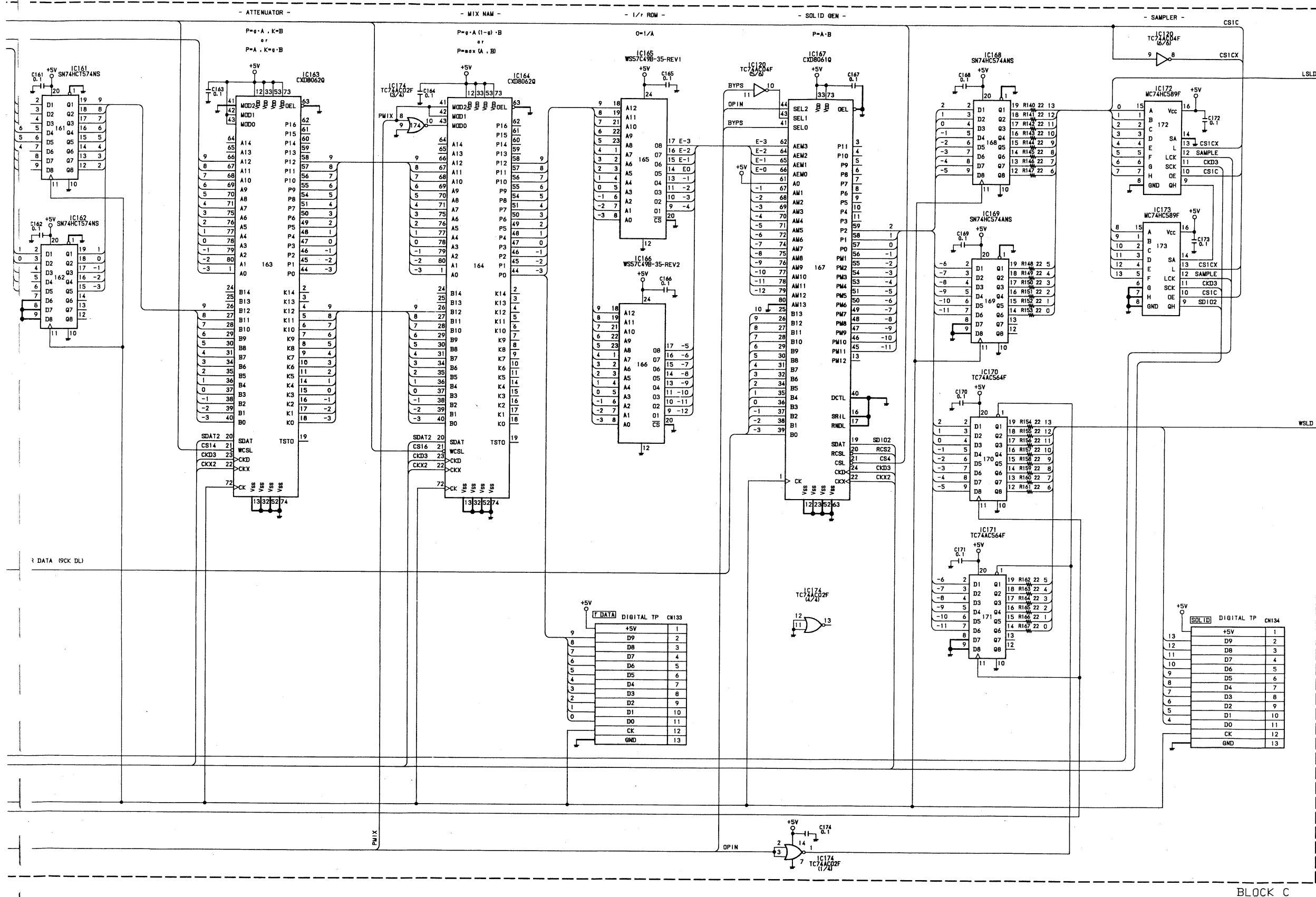
5





- RAM OUTPUT SELECTOR -



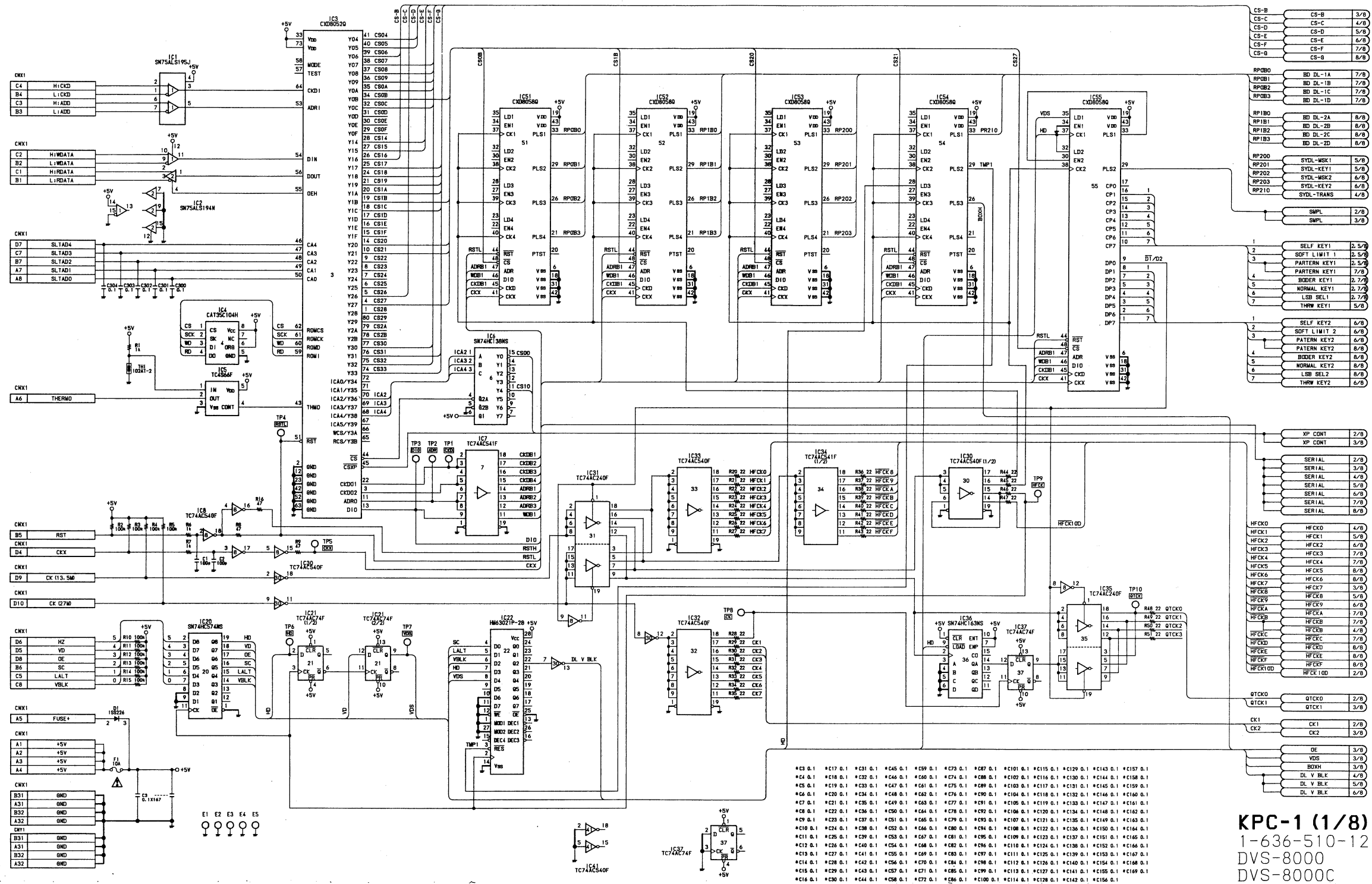


WKG-4 (5/5)
1-636-508-13
DVS-8000
DVS-8000C

KPC-1 KEY PROCESSOR BOARD

KPC-1 (1/8)

KPC-1 (1/8)



KPC-1 (1/8)
1-636-510-12
DVS-8000
DVS-8000C

KPC-1 KEY PROCESSOR BOARD

KPC-1 (2/8)

KPC-1 (2/8)

1/8	SELF KEY1	5
1/8	CHROMA KEY1	4
1/8	PATTERN KEY1	3
1/8	BORDER KEY1	2
1/8	NORMAL KEY1	1
1/8	LSB SEL1	0

4/8	NTRS 11-0	12
4/8	OTRS 11-0	12

CNV1		
B3	FILL2 9	9
A3	FILL2 8	8
D4	FILL2 7	7
C4	FILL2 6	6
B4	FILL2 5	5
A4	FILL2 4	4
D5	FILL2 3	3
C5	FILL2 2	2
B5	FILL2 1	1
A5	FILL2 0	0

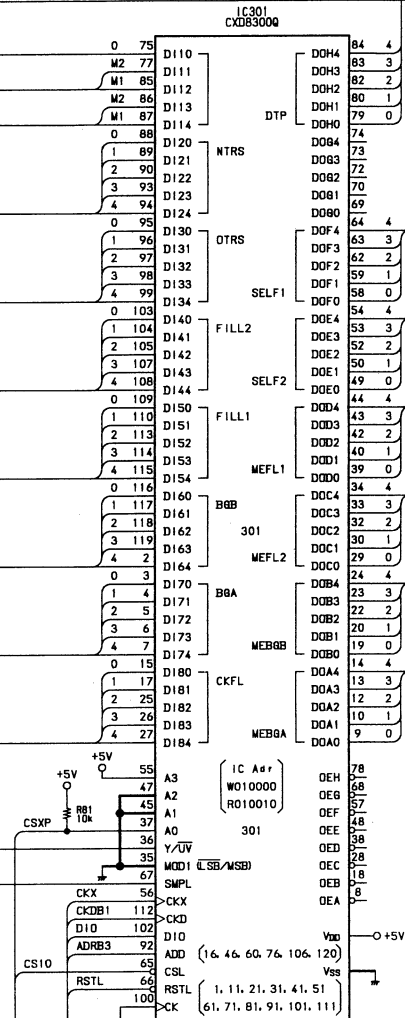
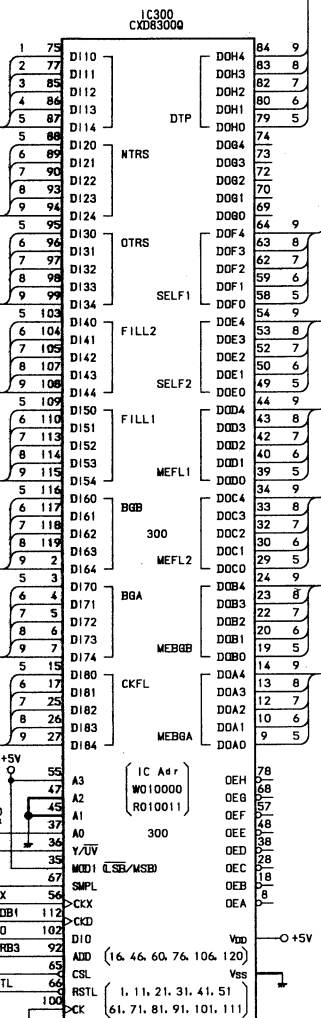
CNV1		
D6	FILL1 9	9
C6	FILL1 8	8
B6	FILL1 7	7
A6	FILL1 6	6
D7	FILL1 5	5
C7	FILL1 4	4
B7	FILL1 3	3
A7	FILL1 2	2
D8	FILL1 1	1
C8	FILL1 0	0

CNV1		
D1	BKGD B 9	9
C1	BKGD B 8	8
B1	BKGD B 7	7
A1	BKGD B 6	6
D2	BKGD B 5	5
C2	BKGD B 4	4
B2	BKGD B 3	3
A2	BKGD B 2	2
D3	BKGD B 1	1
C3	BKGD B 0	0

CNX1		
D29	BKGD A 9	9
C29	BKGD A 8	8
B29	BKGD A 7	7
A29	BKGD A 6	6
D30	BKGD A 5	5
C30	BKGD A 4	4
B30	BKGD A 3	3
A30	BKGD A 2	2
D31	BKGD A 1	1
C31	BKGD A 0	0

CNX1		
B26	CRKY 9	9
A26	CRKY 8	8
D27	CRKY 7	7
C27	CRKY 6	6
B27	CRKY 5	5
A27	CRKY 4	4
D28	CRKY 3	3
C28	CRKY 2	2
B28	CRKY 1	1
A28	CRKY 0	0

1/8	SERIAL	
1/8	CK1	
1/8	HFCK 100	
1/8	QTCKO	
1/8	SMPL	
1/8	XP CONT	



SELF KEY1 9-0		5/8
SELF KEY2 9-0		6/8

VIDEO SELECT		
+5V	DIGITAL TP	CN10
9	R300 22	+5V
8	R301 22	DTP 29
7	R302 22	DTP 28
6	R303 22	DTP 27
5	R304 22	DTP 26
4	R305 22	DTP 25
3	R306 22	DTP 24
2	R307 22	DTP 23
1	R308 22	DTP 22
0	R309 22	DTP 21
		DTP 20
		CK
		GND

CNX1		
9	R340 22	WEFL1 9
8	R341 22	WEFL1 8
7	R342 22	WEFL1 7
6	R343 22	WEFL1 6
5	R344 22	WEFL1 5
4	R345 22	WEFL1 4
3	R346 22	WEFL1 3
2	R347 22	WEFL1 2
1	R348 22	WEFL1 1
0	R349 22	WEFL1 0

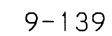
CNX1		
9	R350 22	WEFL2 9
8	R351 22	WEFL2 8
7	R352 22	WEFL2 7
6	R353 22	WEFL2 6
5	R354 22	WEFL2 5
4	R355 22	WEFL2 4
3	R356 22	WEFL2 3
2	R357 22	WEFL2 2
1	R358 22	WEFL2 1
0	R359 22	WEFL2 0

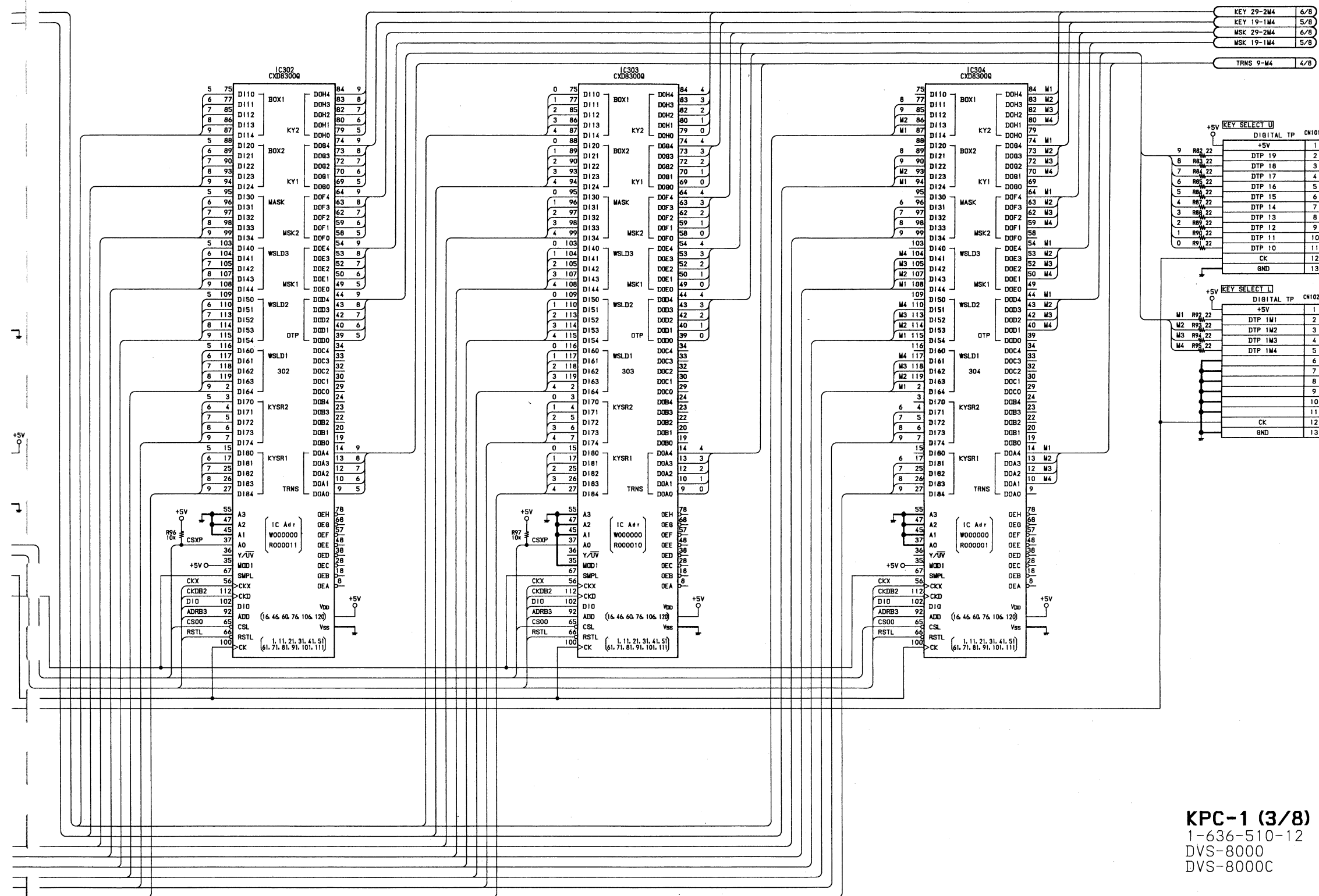
CNX1		
9	R320 22	WEBG B 9
8	R321 22	WEBG B 8
7	R322 22	WEBG B 7
6	R323 22	WEBG B 6
5	R324 22	WEBG B 5
4	R325 22	WEBG B 4
3	R326 22	WEBG B 3
2	R327 22	WEBG B 2
1	R328 22	WEBG B 1
0	R329 22	WEBG B 0

CNX1		
9	R310 22	WEBG A 9
8	R311 22	WEBG A 8
7	R312 22	WEBG A 7
6	R313 22	WEBG A 6
5	R314 22	WEBG A 5
4	R315 22	WEBG A 4
3	R316 22	WEBG A 3
2	R317 22	WEBG A 2
1	R318 22	WEBG A 1
0	R319 22	WEBG A 0

KPC-1 (2/8)
1-636-510-12
DVS-8000
DVS-8000C

-SYX121-KPCI-12#3





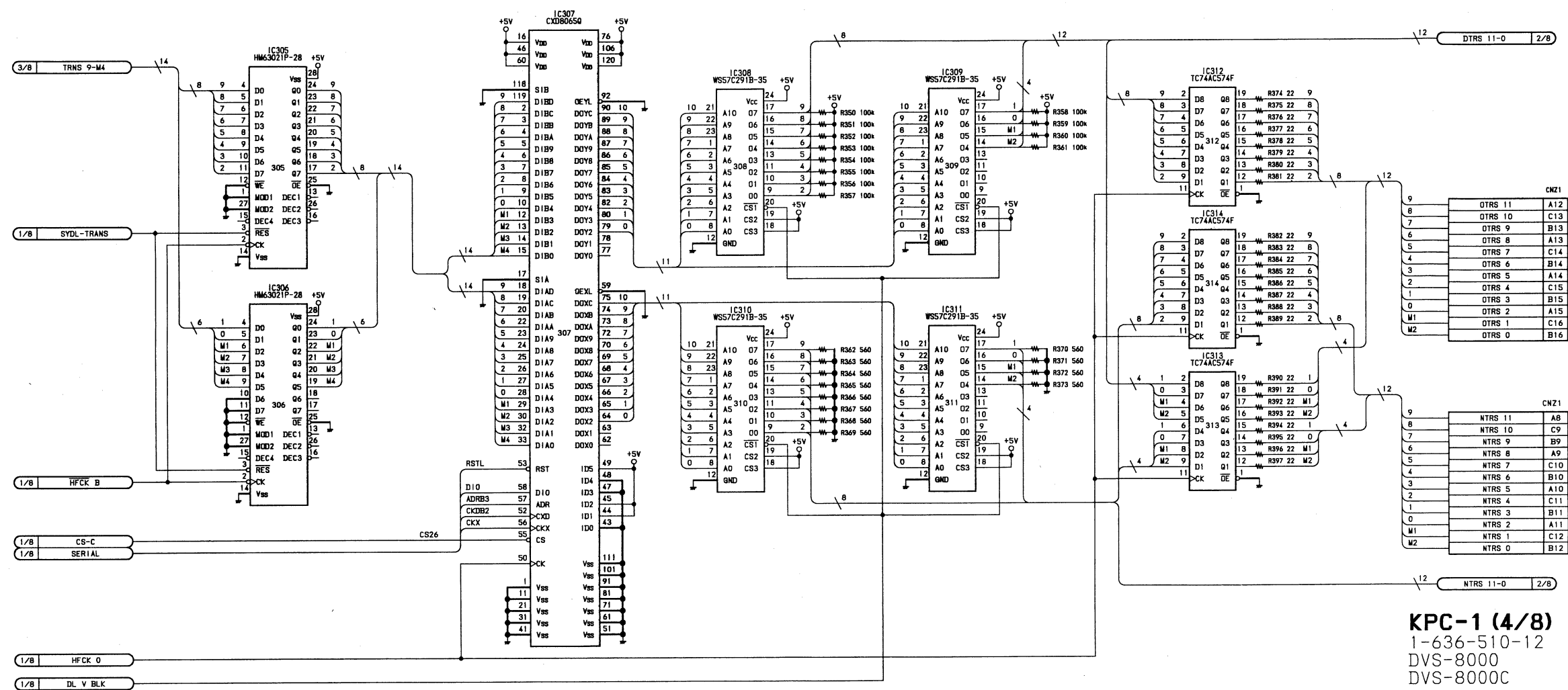
KPC-1 (3/8)

1-636-510-12

DVS-8000

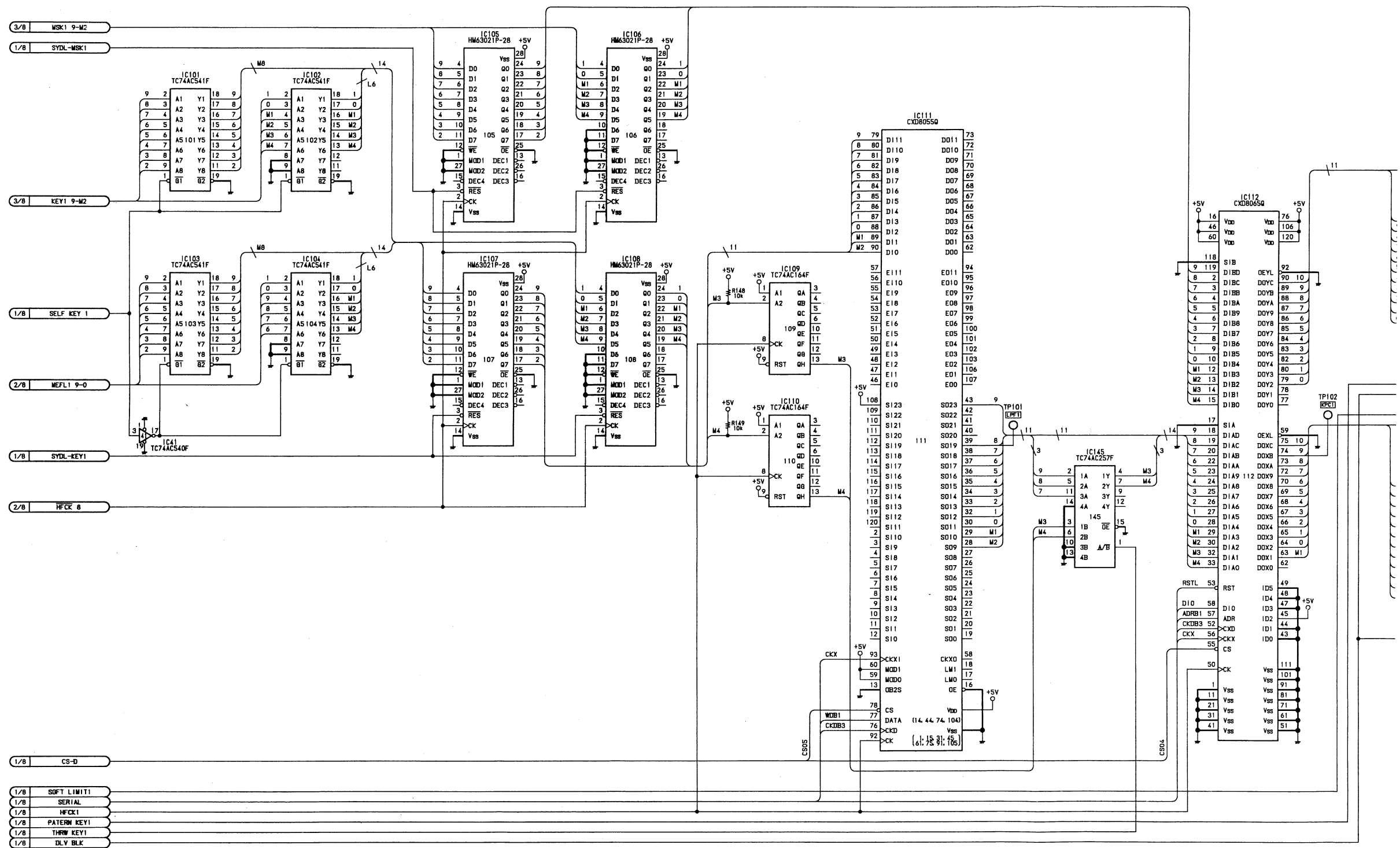
DVS-8000C

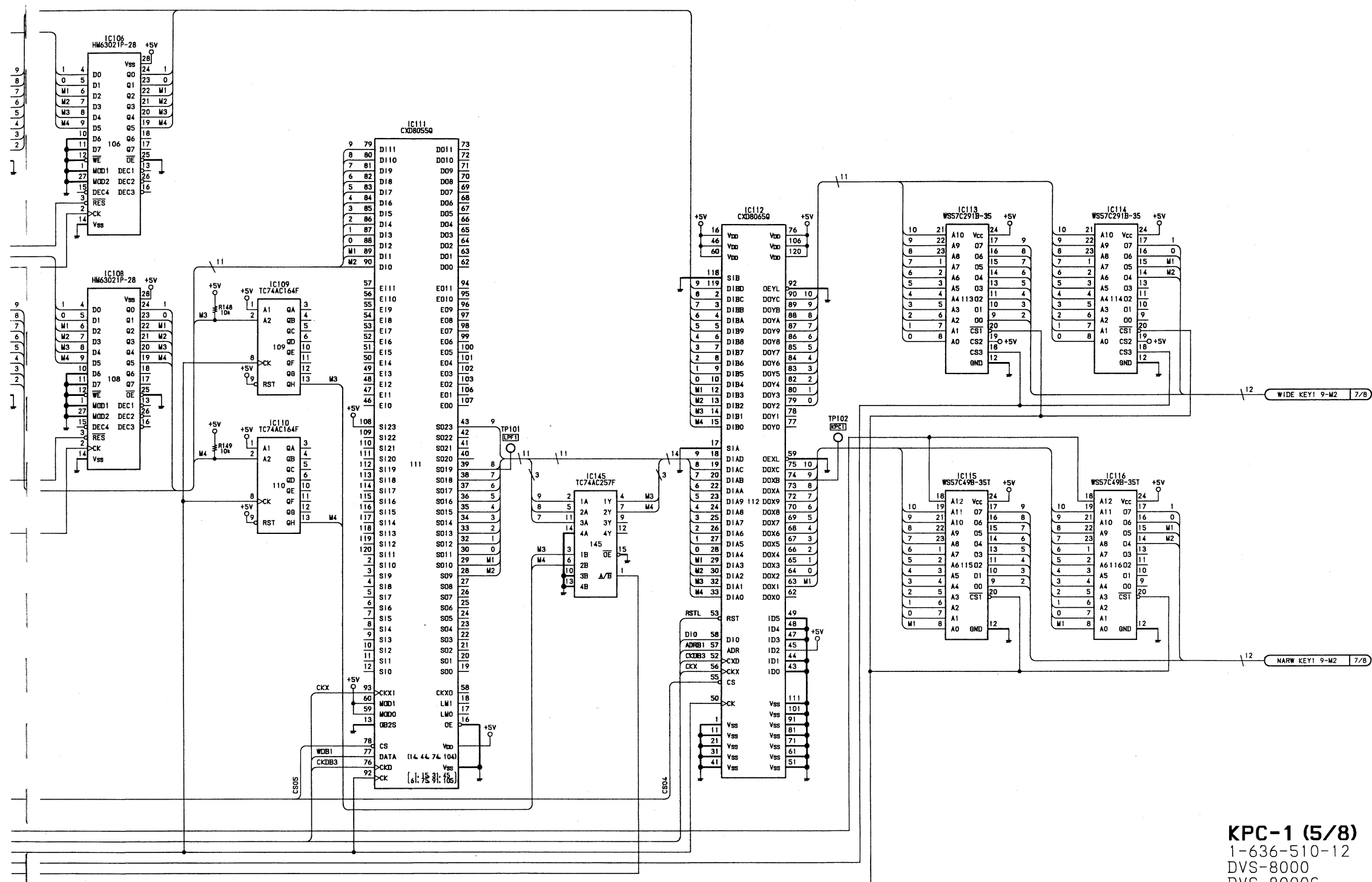
KPC-1 KEY PROCESSOR BOARD



KPC-1 (4/8)
1-636-510-12
DVS-8000
DVS-8000C

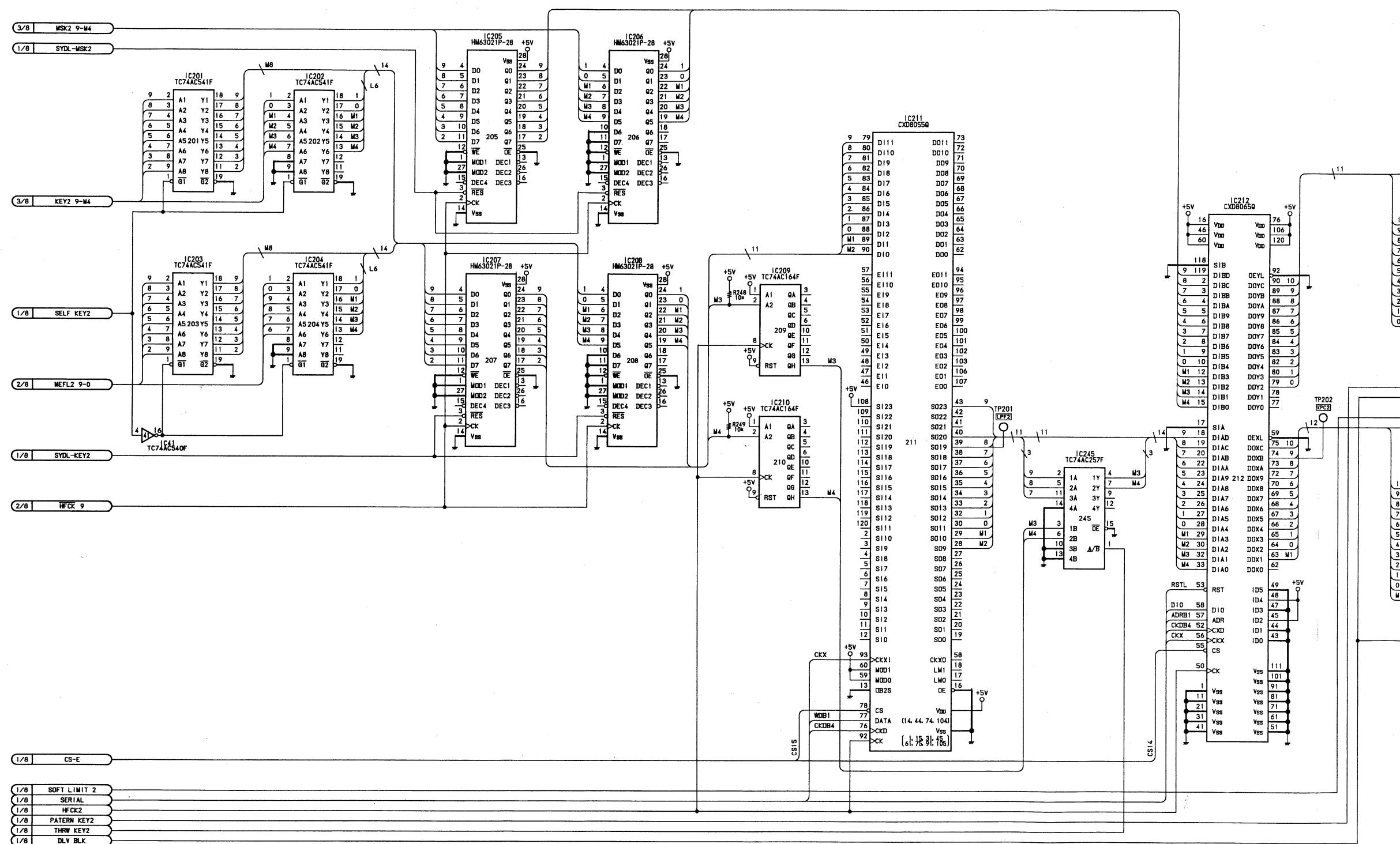
KPC-1 KEY PROCESSOR BOARD

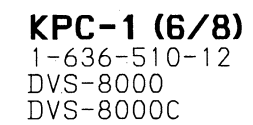




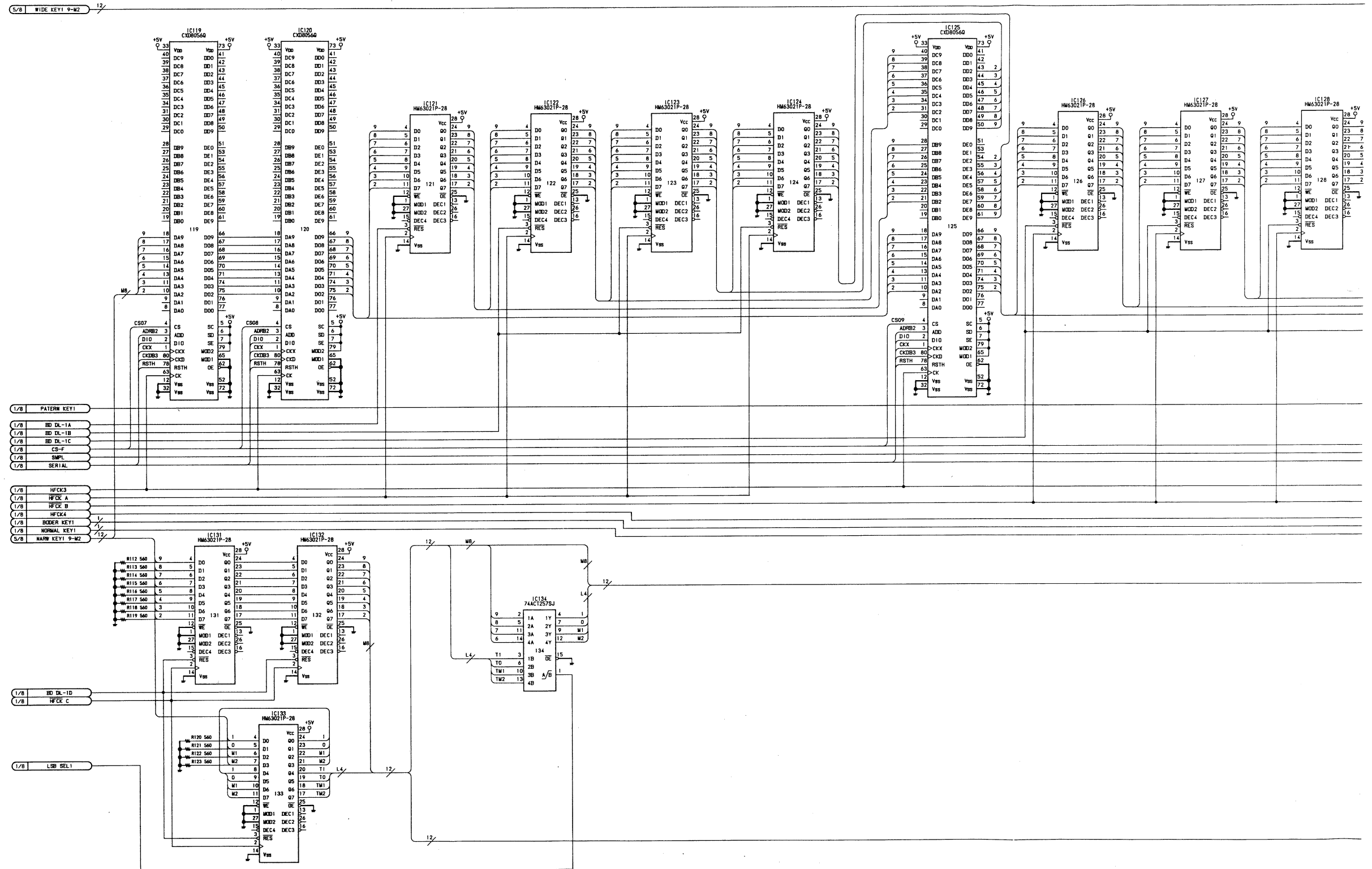
KPC-1 (5/8)
1-636-510-12
DVS-8000
DVS-8000C

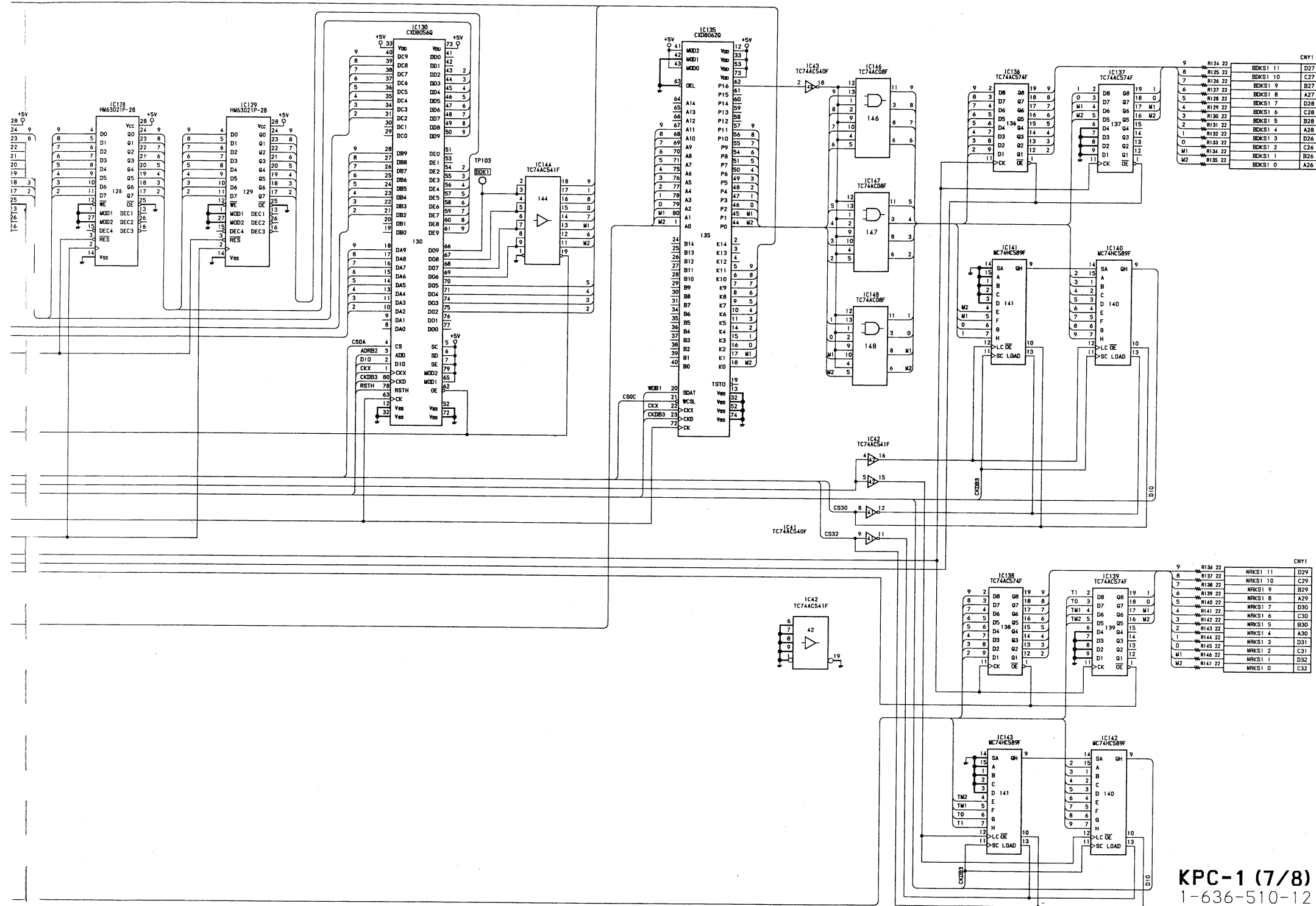
KPC-1 KEY PROCESSOR BOARD

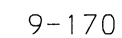


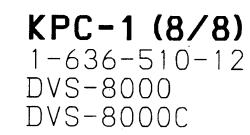


KPC-1 KEY PROCESSOR BOARD

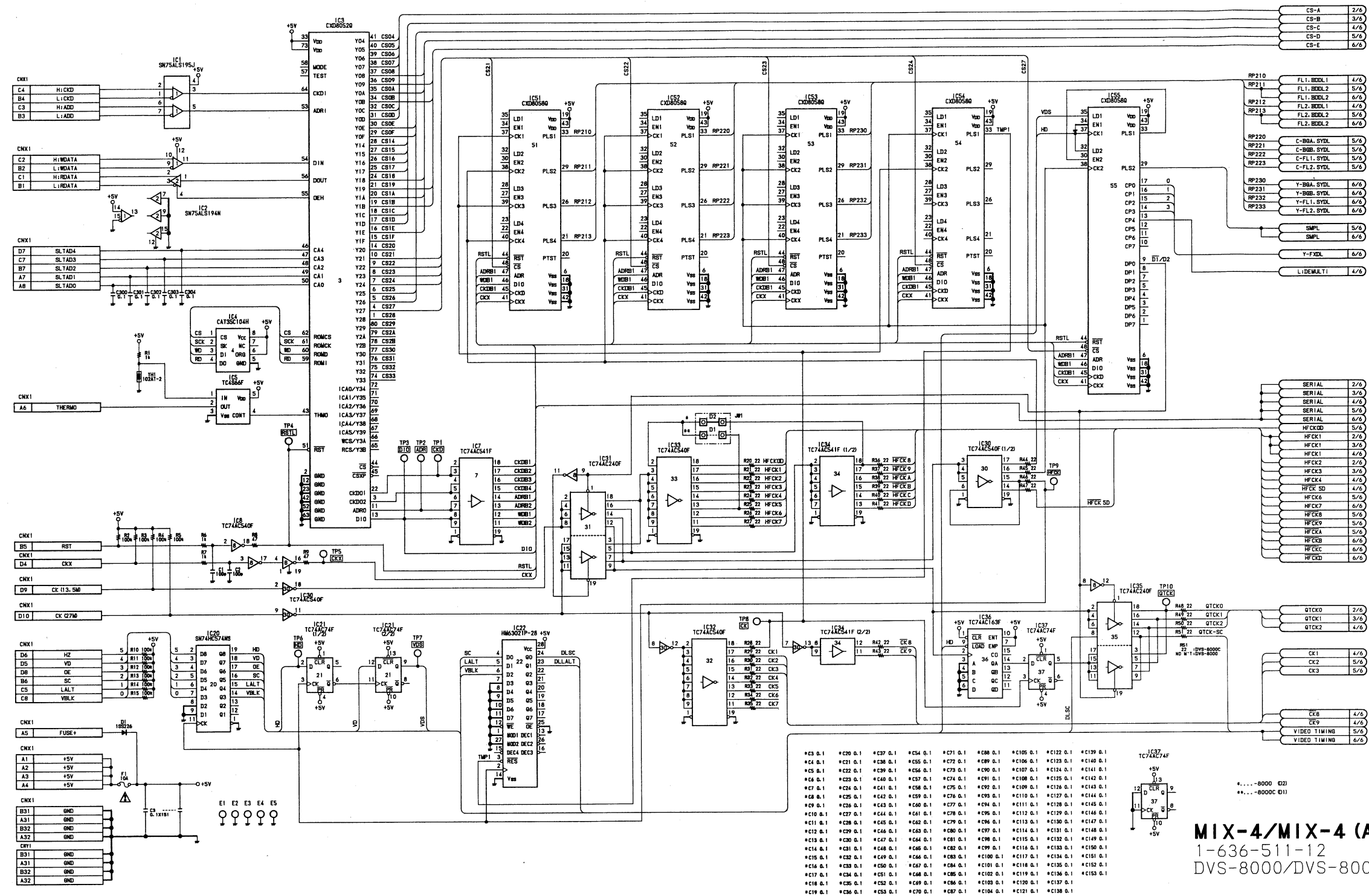






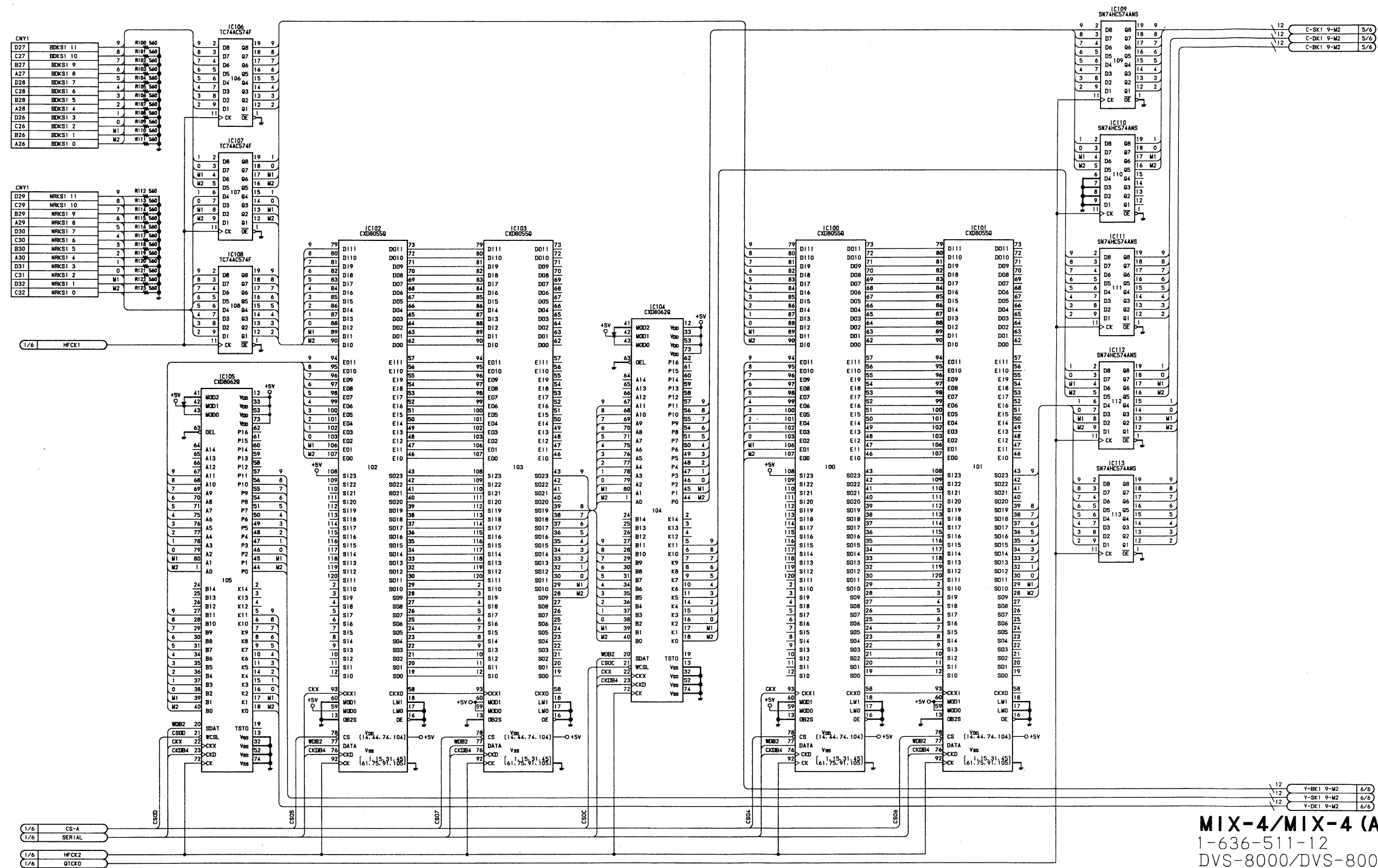


MIX-4/MIX-4 (A) MIXER BOARD



MIX-4/MIX-4 (A) (1/6)
1-636-511-12
DVS-8000/DVS-8000C

MIX-4/MIX-4 (A) MIXER BOARD

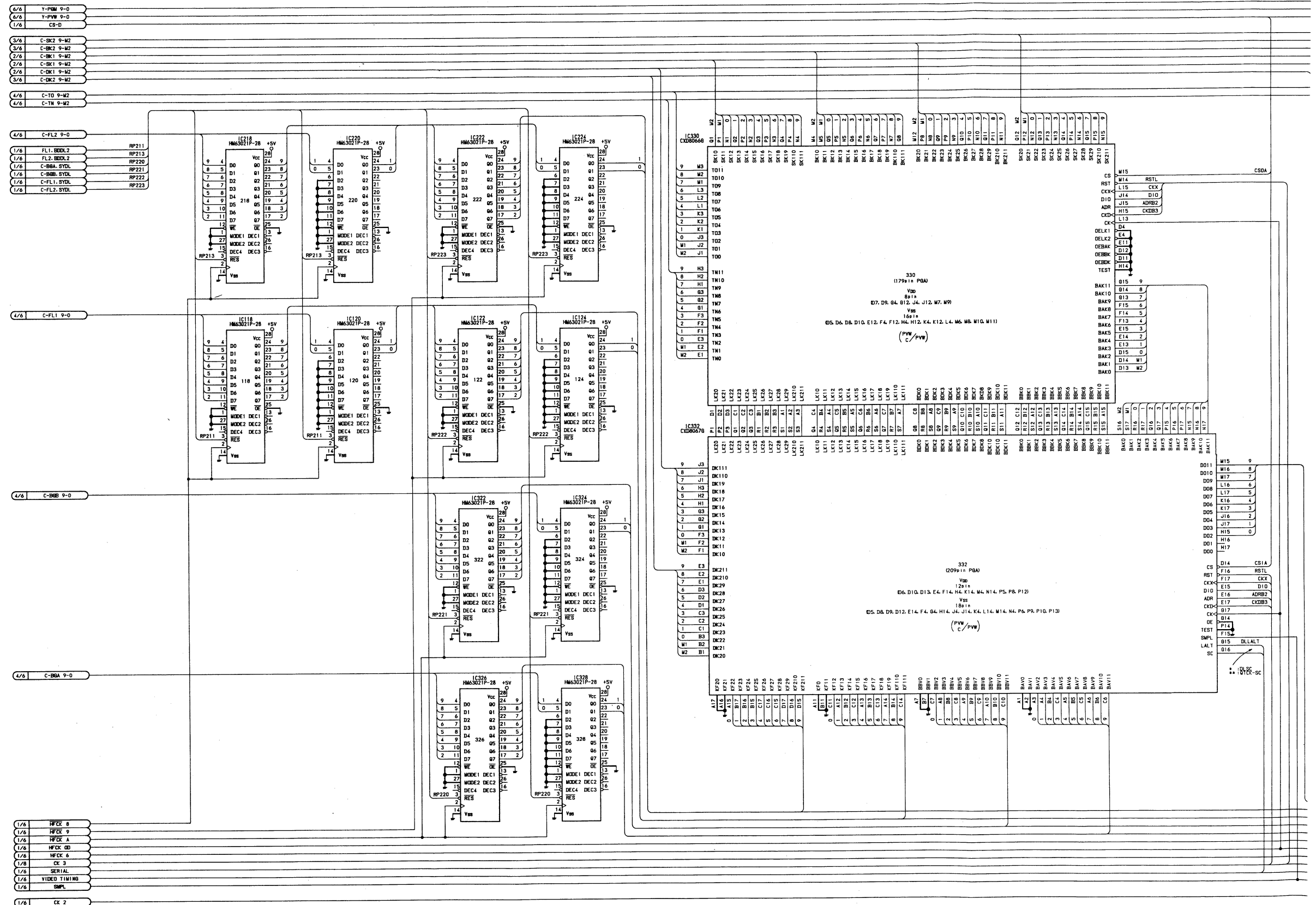


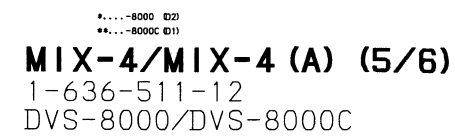
MIX-4/MIX-4 (A) (3/6)
1-636-511-12
DVS-8000/DVS-8000C

1

1-636-511-12
DVS-8000/DVS-8000C

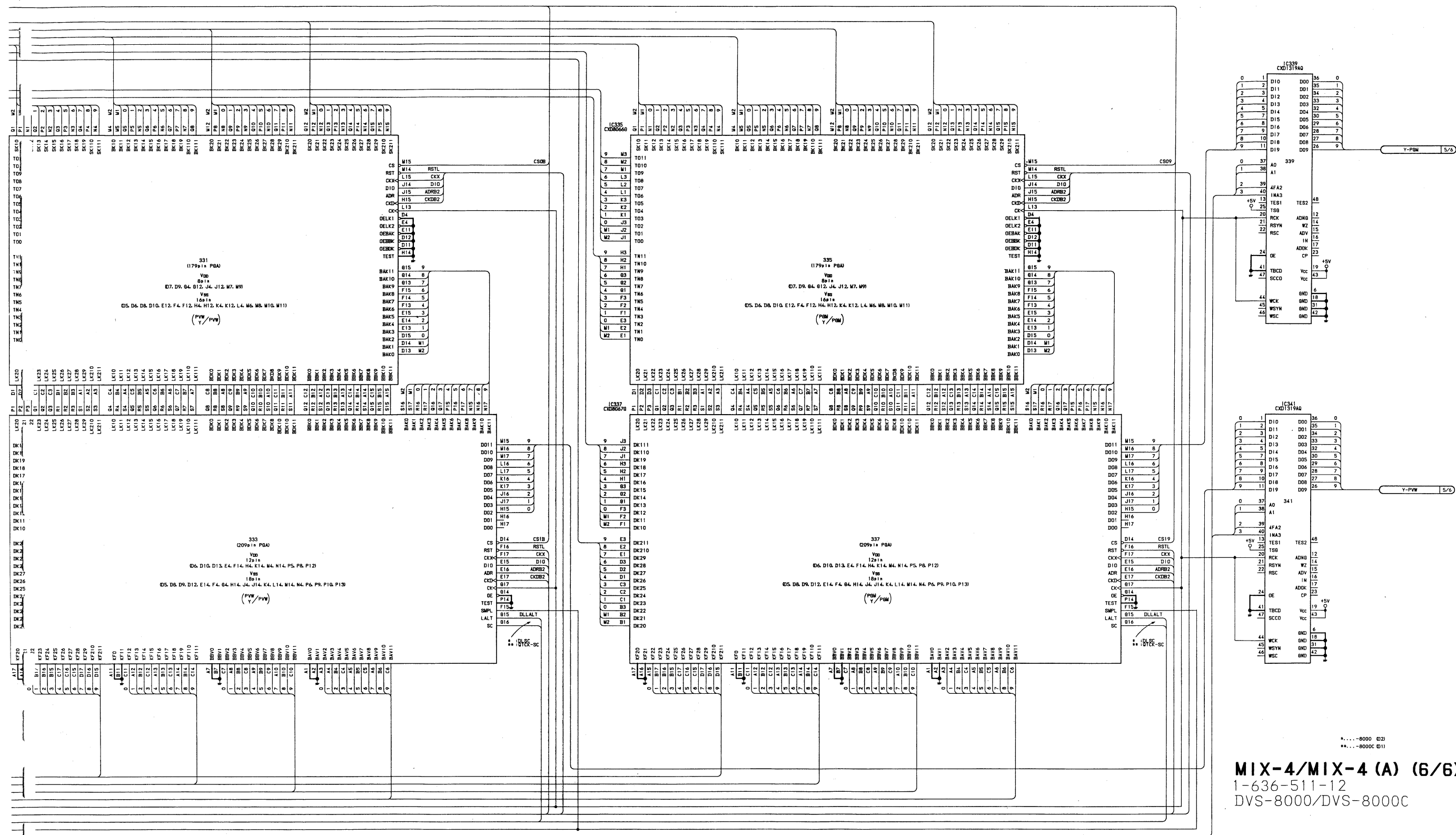
MIX-4/MIX-4 (A) MIXER BOARD





1/6	Y-FXDL
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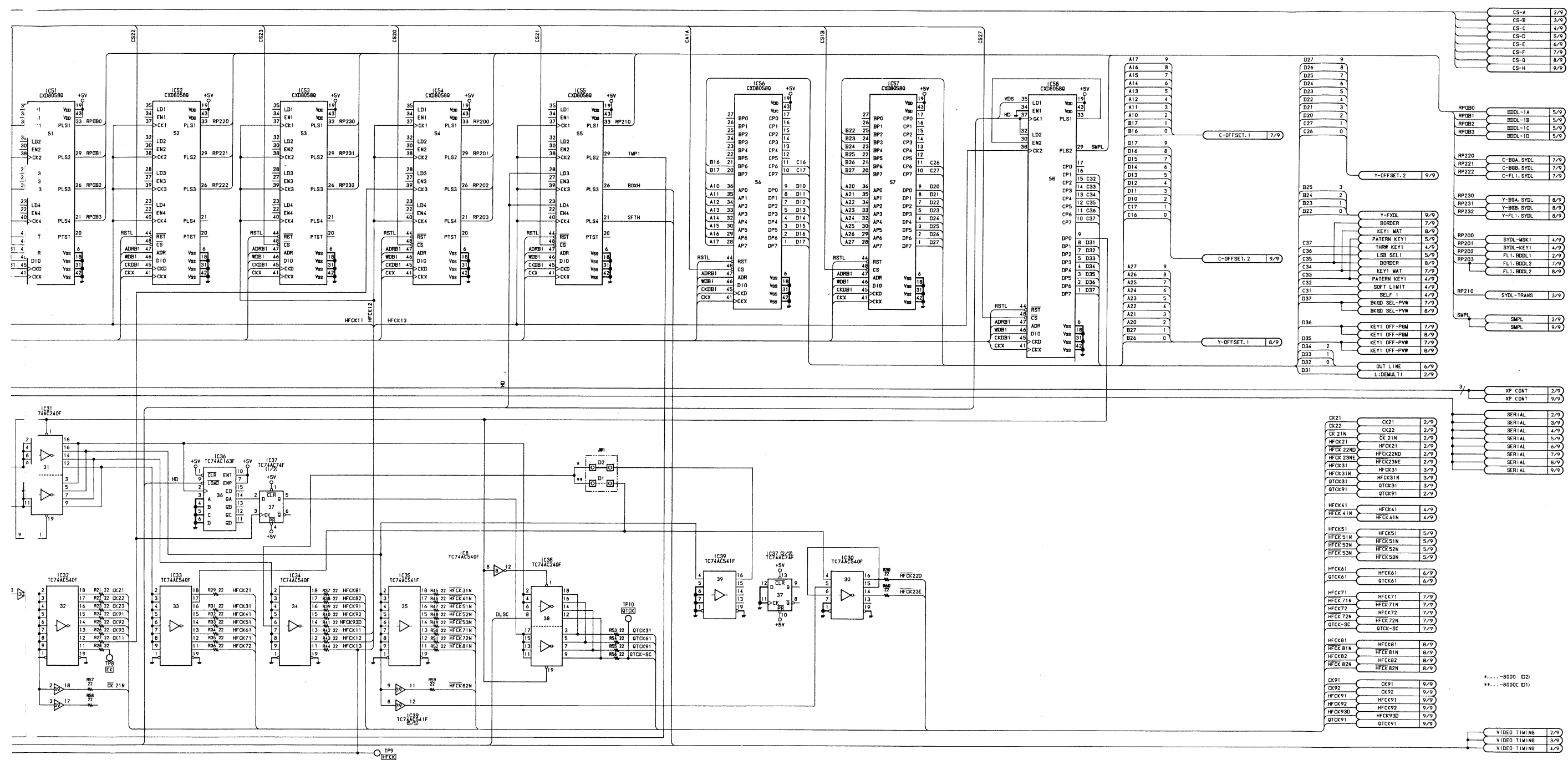
*.....8000 (D2)
 **.....8000C (D1)

MIX-4/MIX-4 (A) (6/6)

1-636-511-12

DVS-8000/DVS-8000C

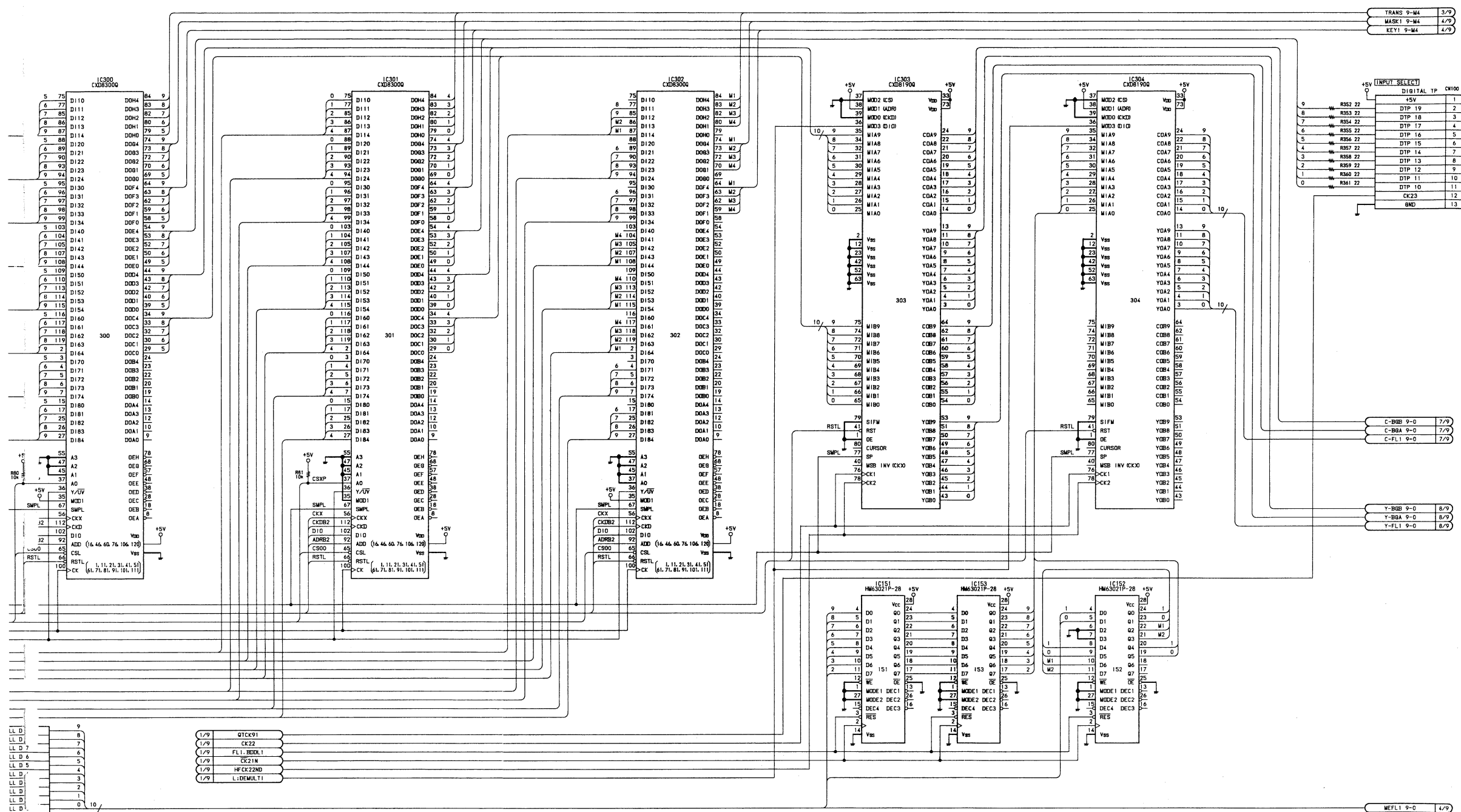
5



MIX-6/MIX-6 (A) (1/9)

1-636-512-12
DVS-8000/DVS-8000C

1. _____
2. _____
3. _____
4. _____
5. _____

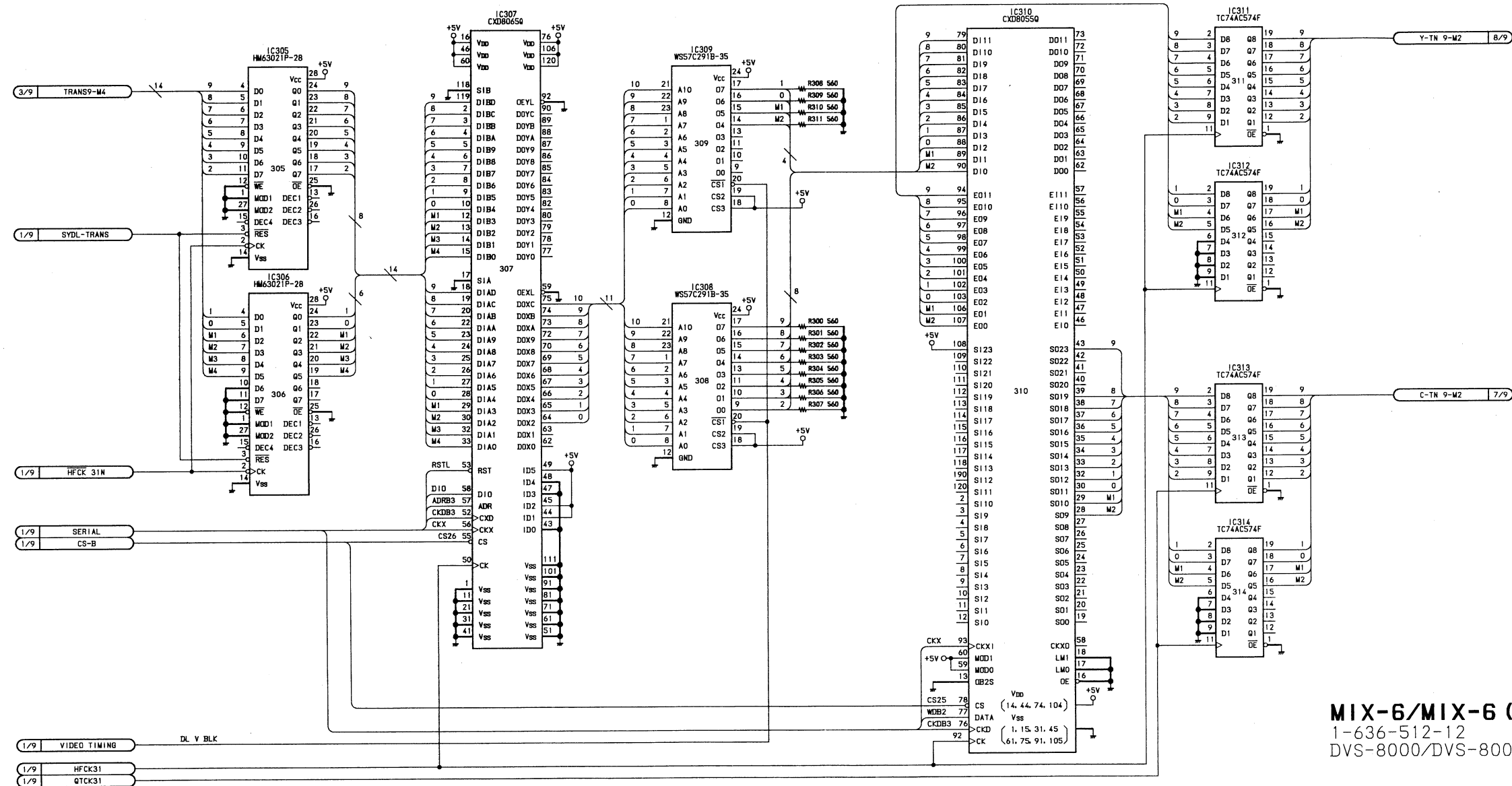


MIX-6/MIX-6 (A) (2/9)

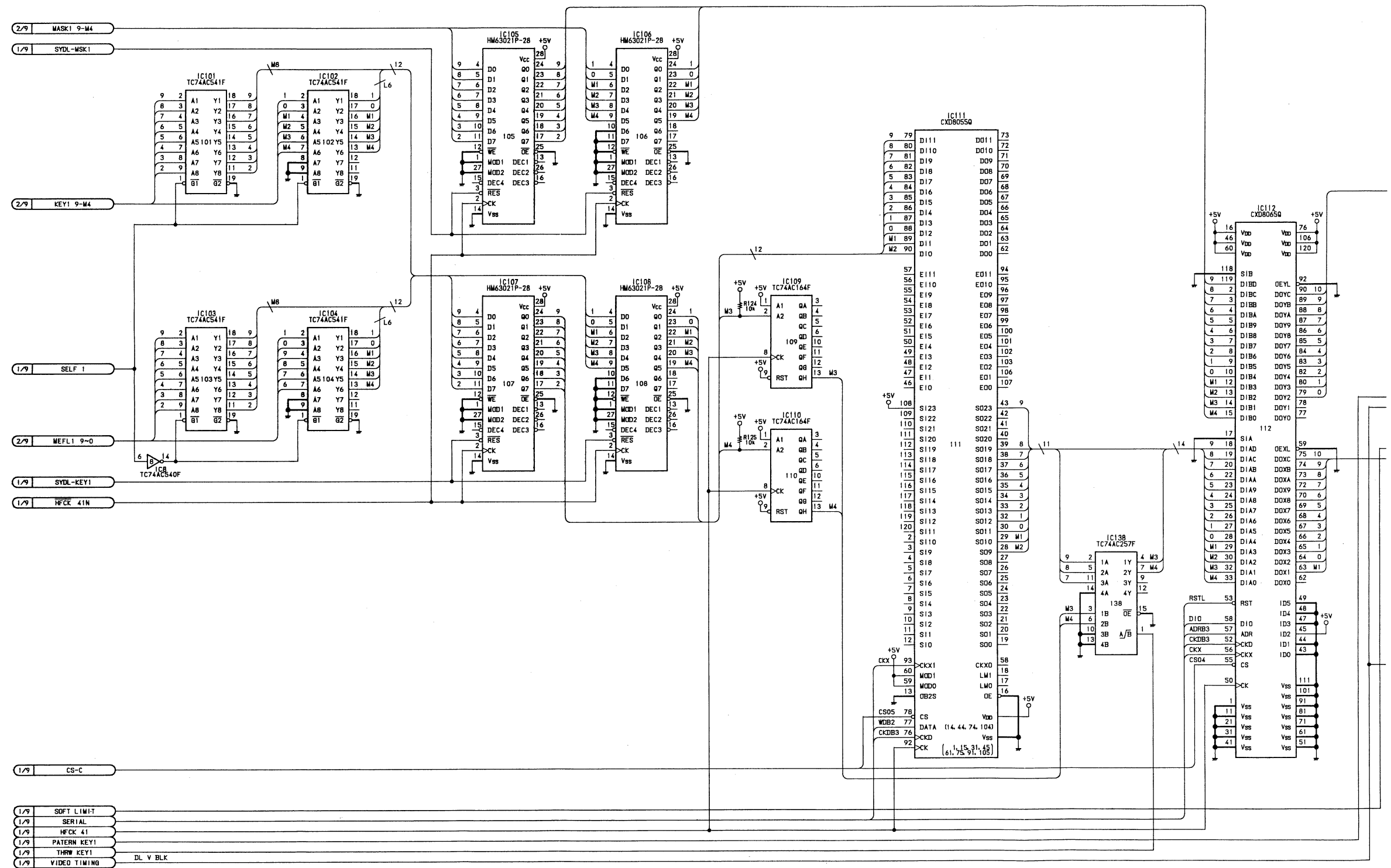
1-636-512-12

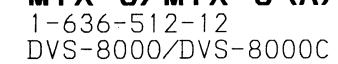
DVS-8000/DVS-8000C

MIX-6/MIX-6 (A) DSK (DOWNSTREAM KEYER) BOARD

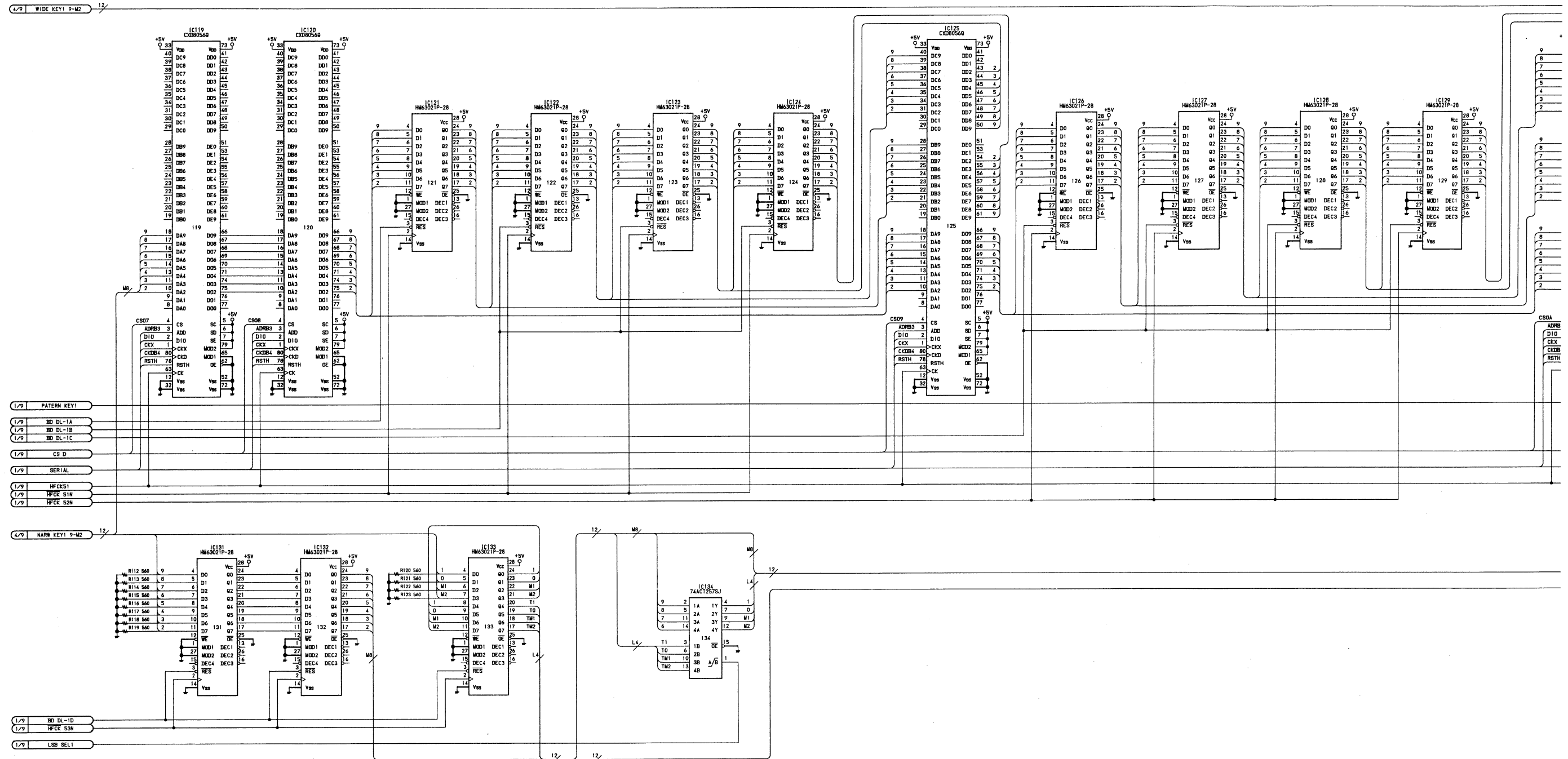


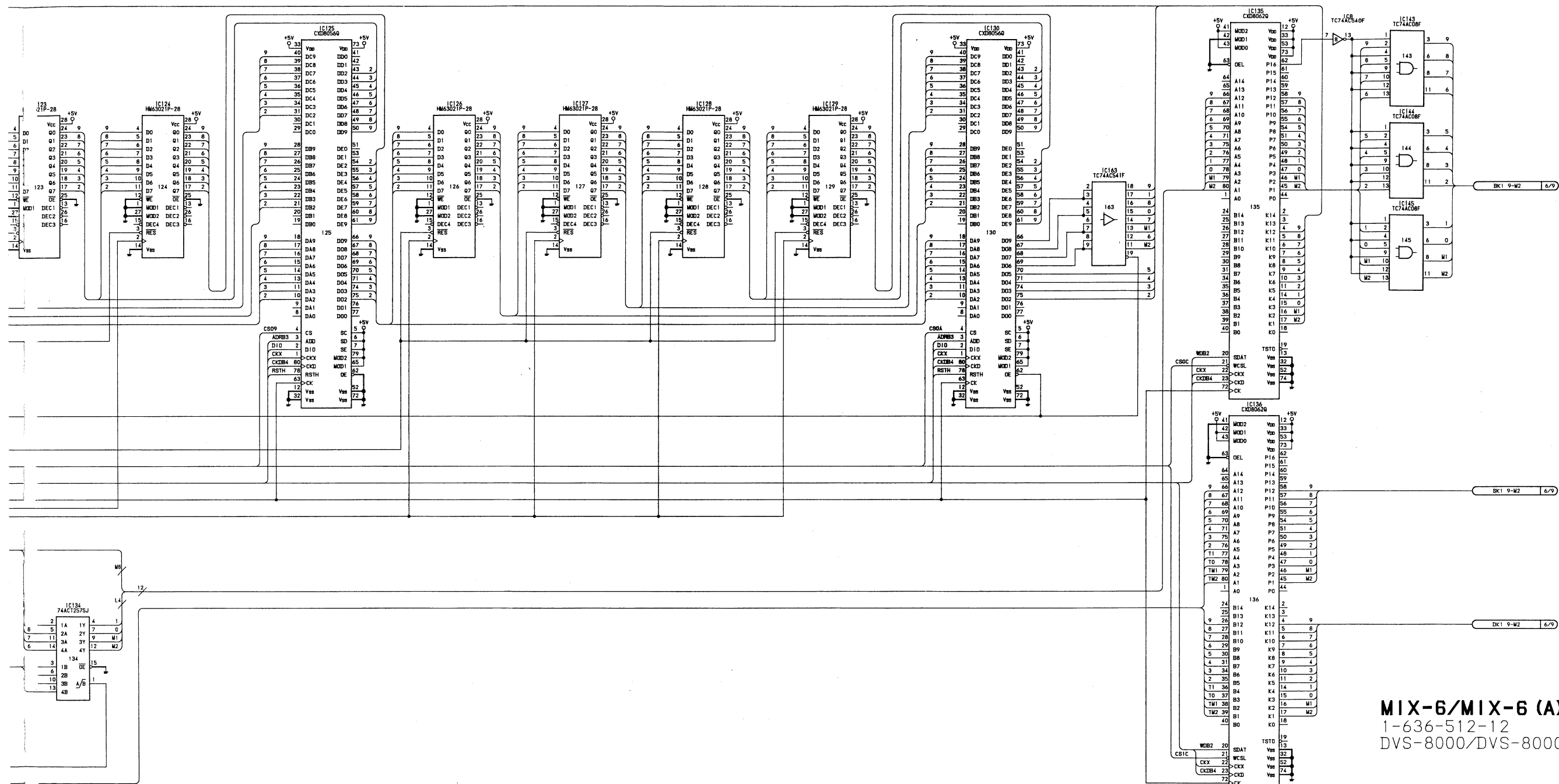
MIX-6/MIX-6 (A) DSK (DOWNSTREAM KEYS) BOARD





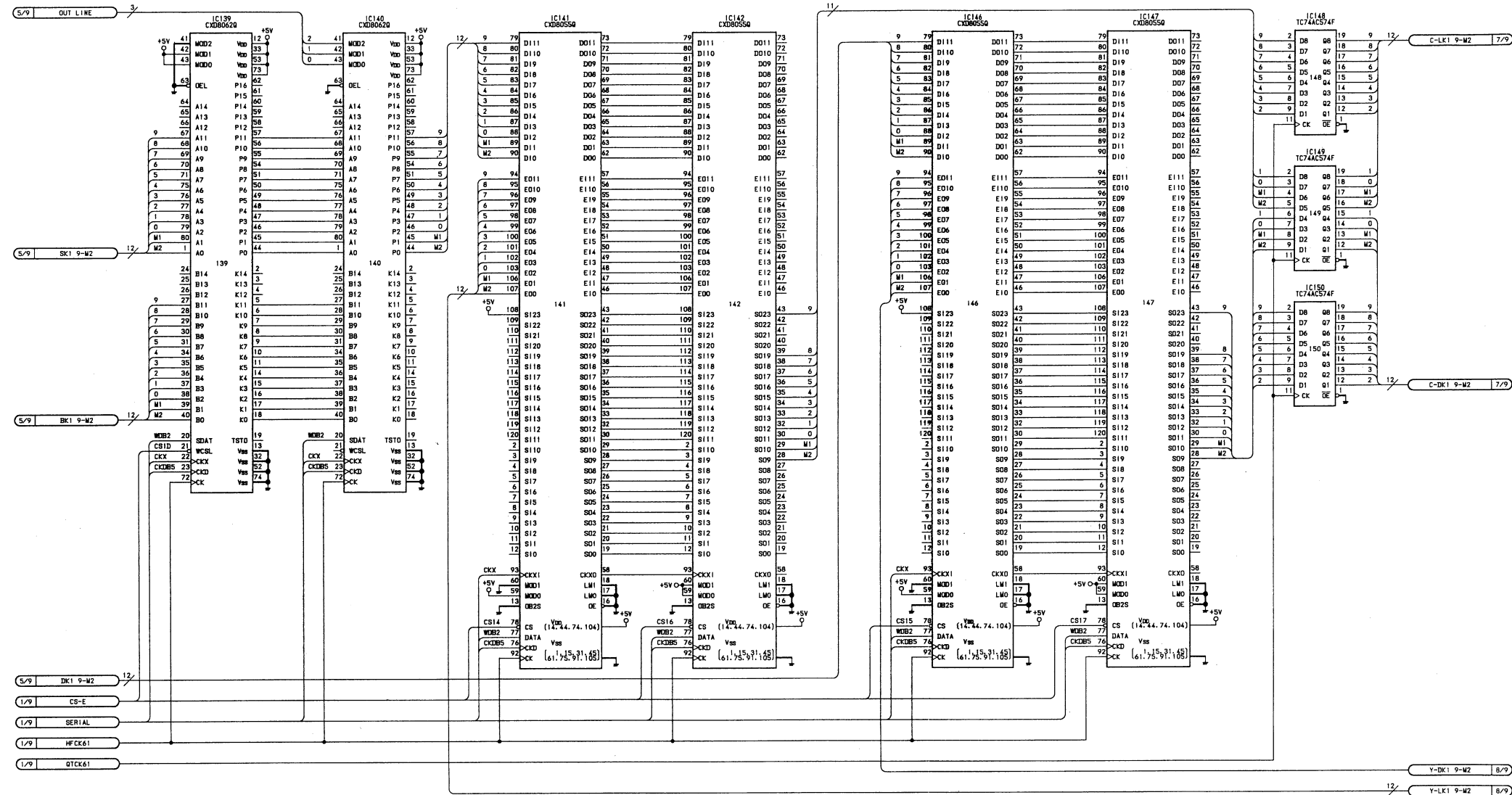
MIX-6/MIX-6 (A) DSK (DOWNSTREAM KEYS) BOARD





MIX-6/MIX-6 (A) (5/9)
1-636-512-12
DVS-8000/DVS-8000C

MIX-6/MIX-6 (A) DSK (DOWNSTREAM KEYER) BOARD

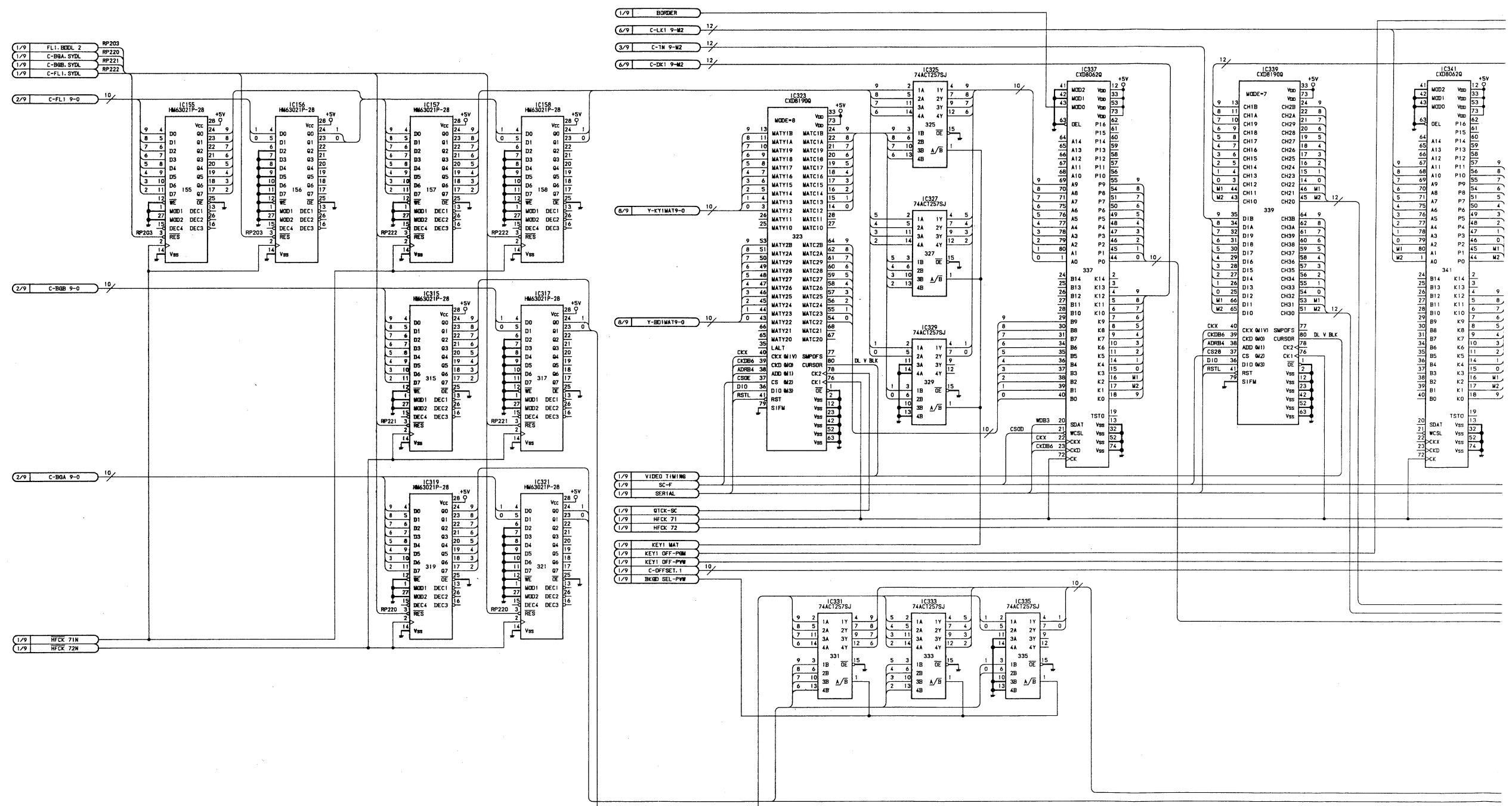


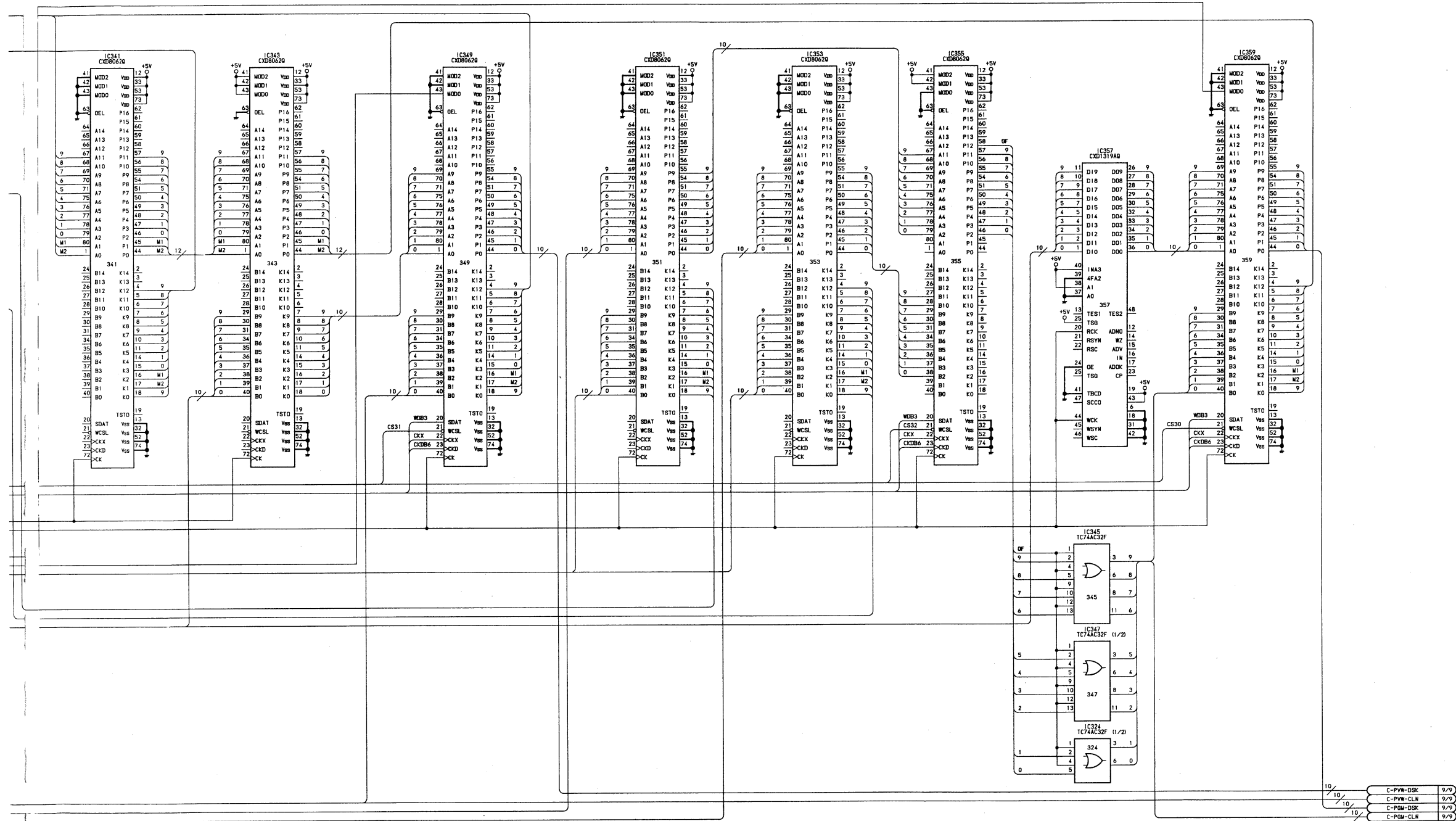
MIX-6/MIX-6 (A) (6/9)

1-636-512-12

DVS-8000/DVS-8000C

MIX-6/MIX-6 (A) DSK (DOWNSTREAM KEYS) BOARD



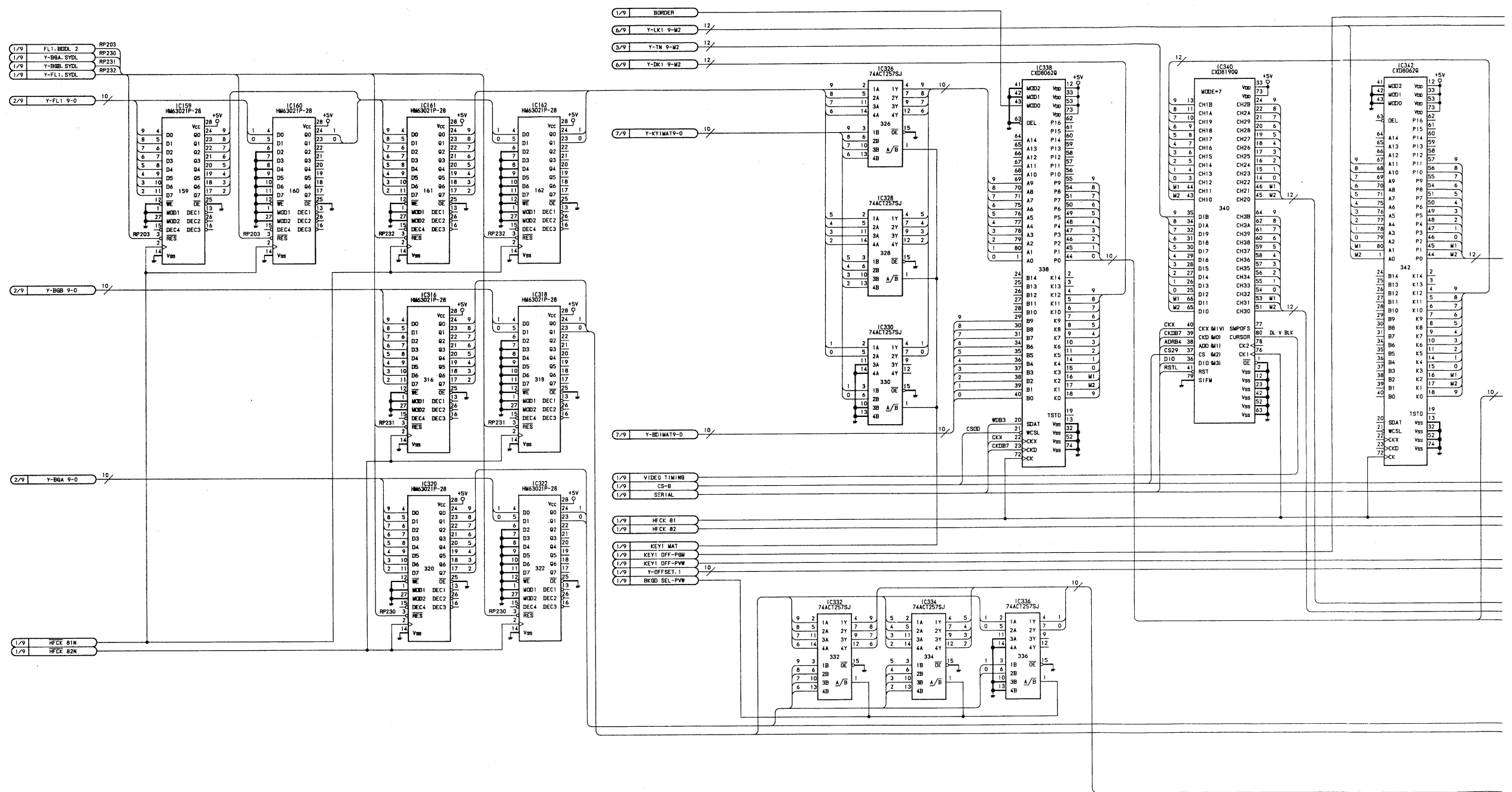


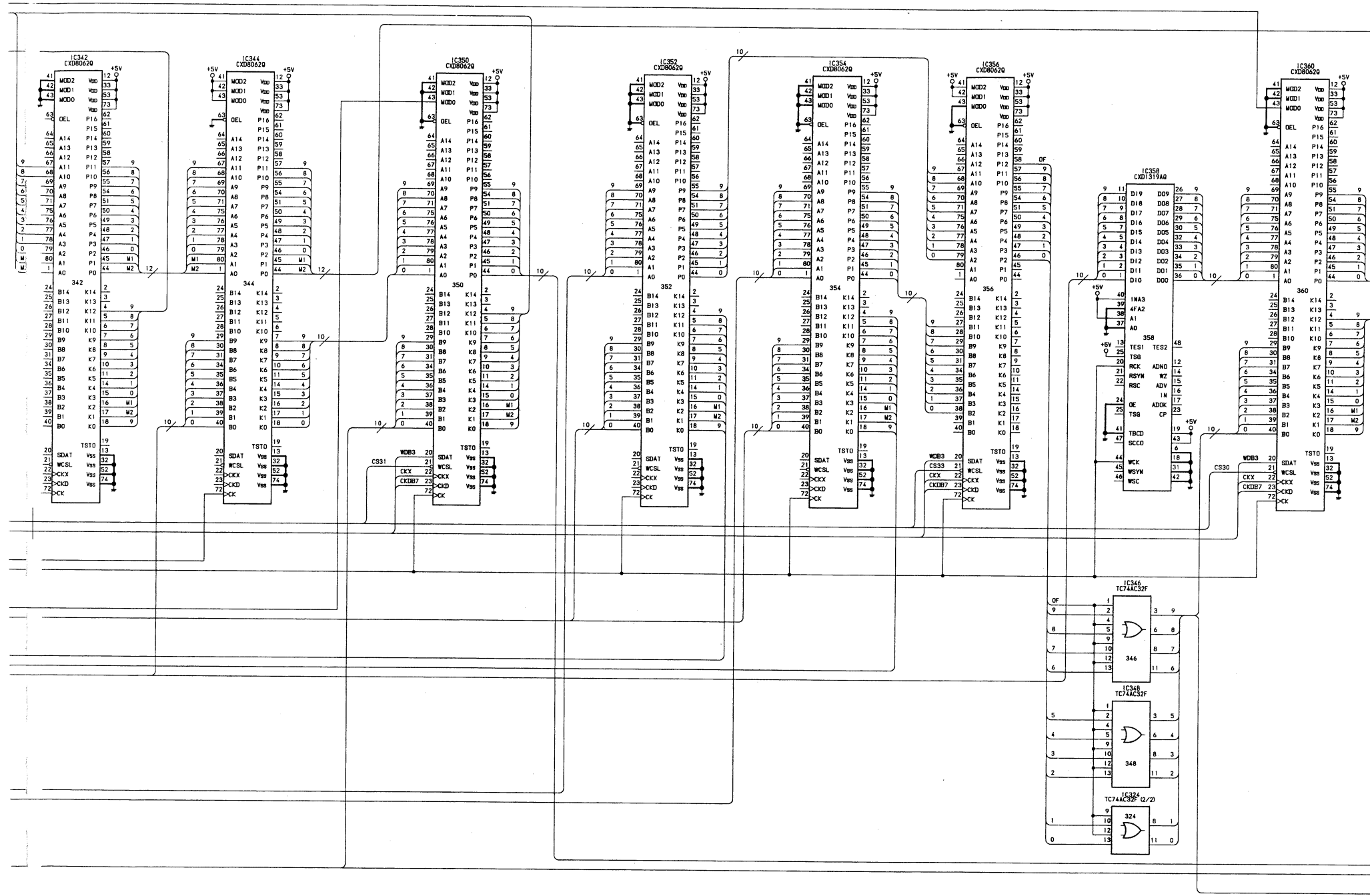
MIX-6/MIX-6 (A) (7/9)

1-636-512-12

DVS-8000/DVS-8000C

MIX-6/MIX-6 (A) DSK (DOWNSTREAM KEYS) BOARD

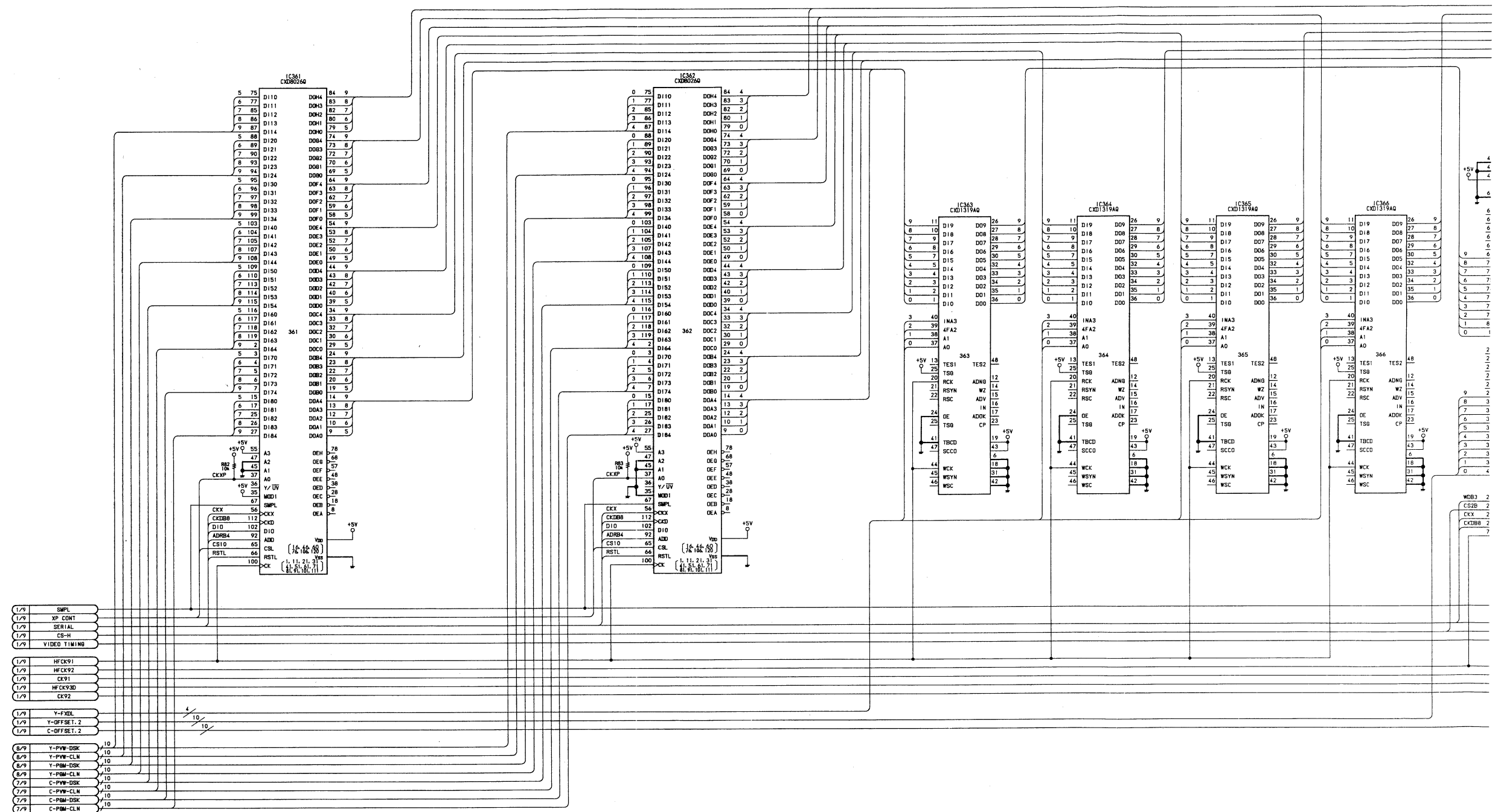




MIX-6/MIX-6 (A) (8/9)
1-636-512-12
DVS-8000/DVS-8000C

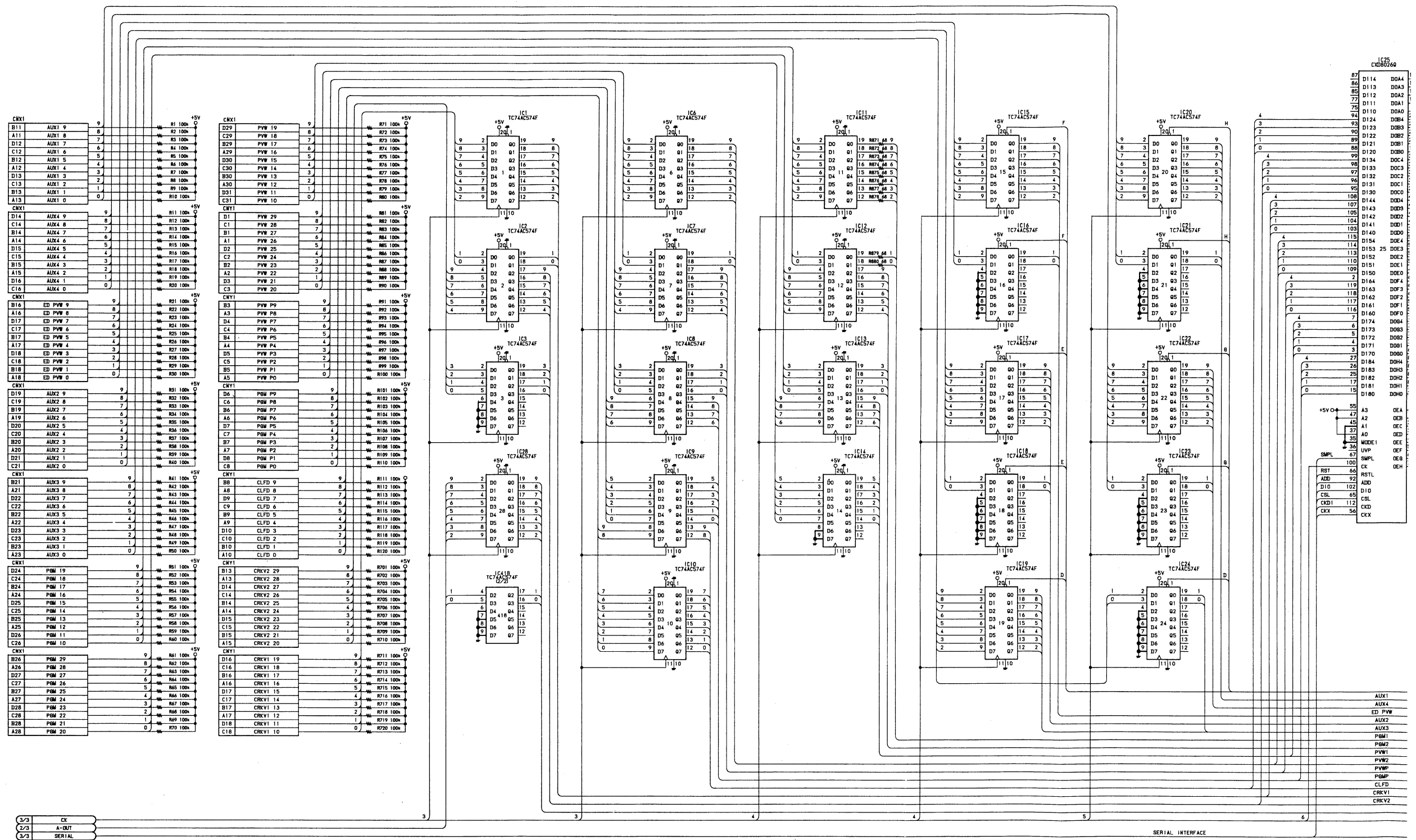
10	Y-PVW-DSK	9/9
10	Y-PVW-CLN	9/9
10	Y-PGW-DSK	9/9
10	Y-PGW-CLN	9/9

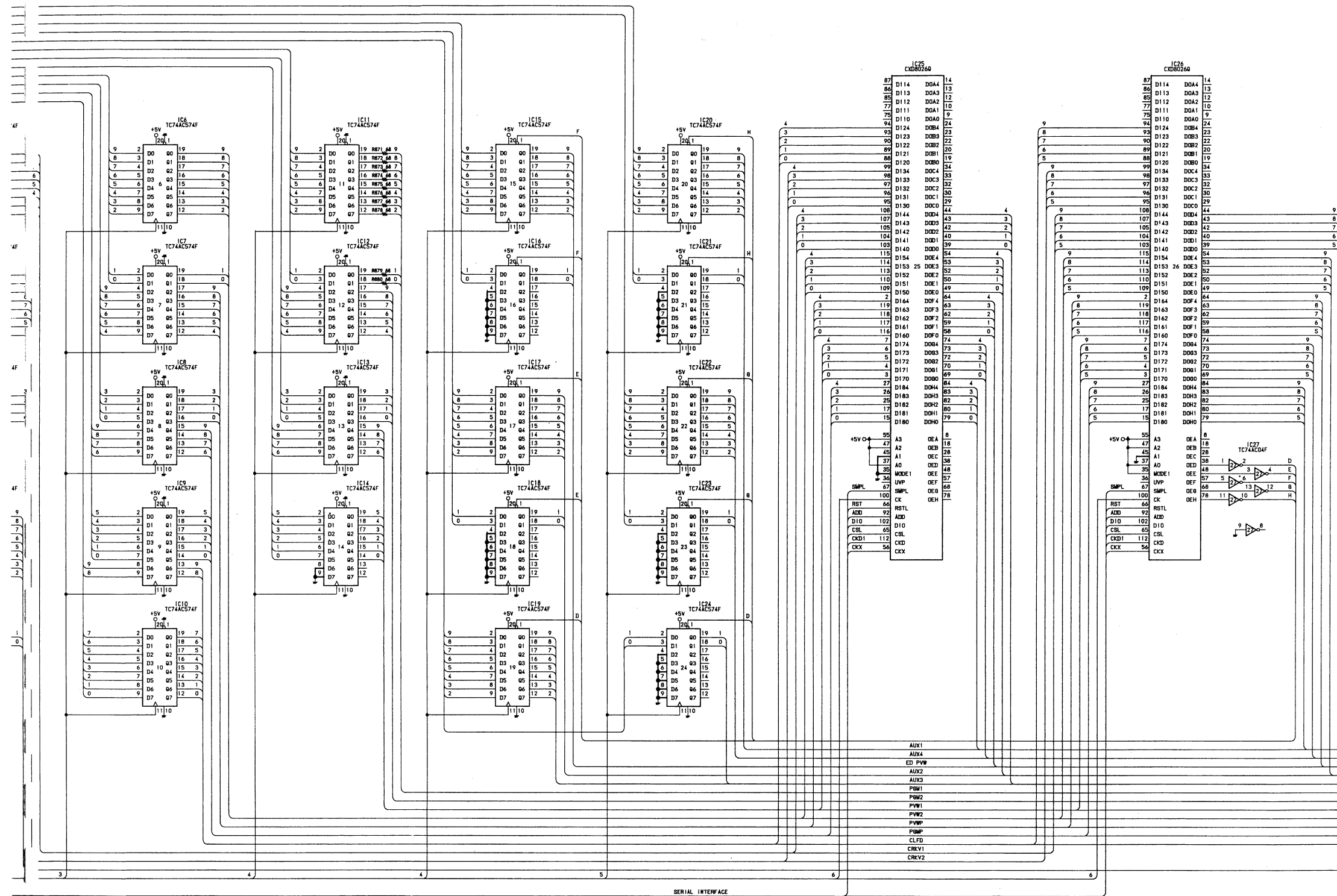
MIX-6/MIX-6 (A) DSK (DOWNSTREAM KEYER) BOARD





OUT-2 OUTPUT PROCESSOR BOARD



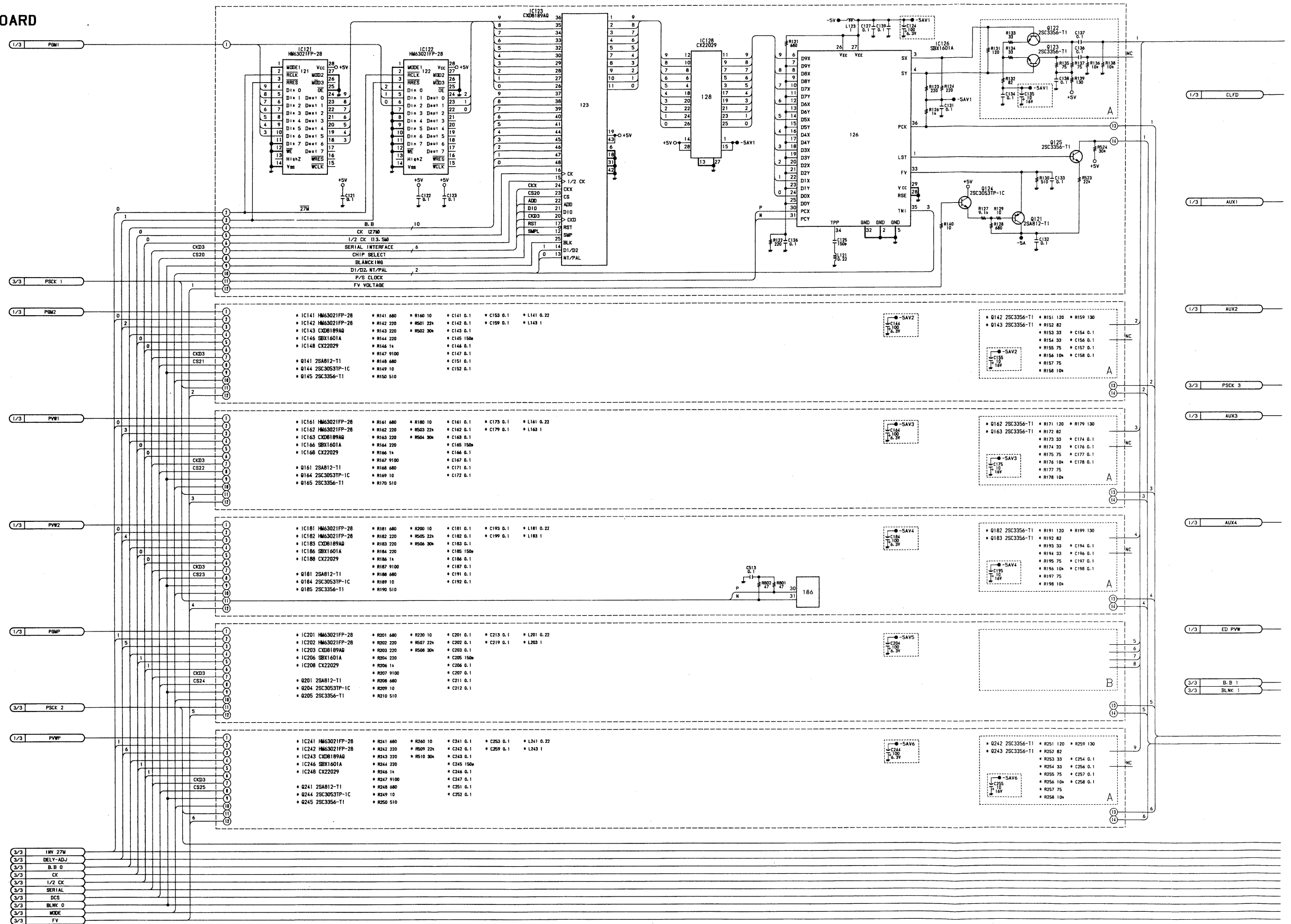


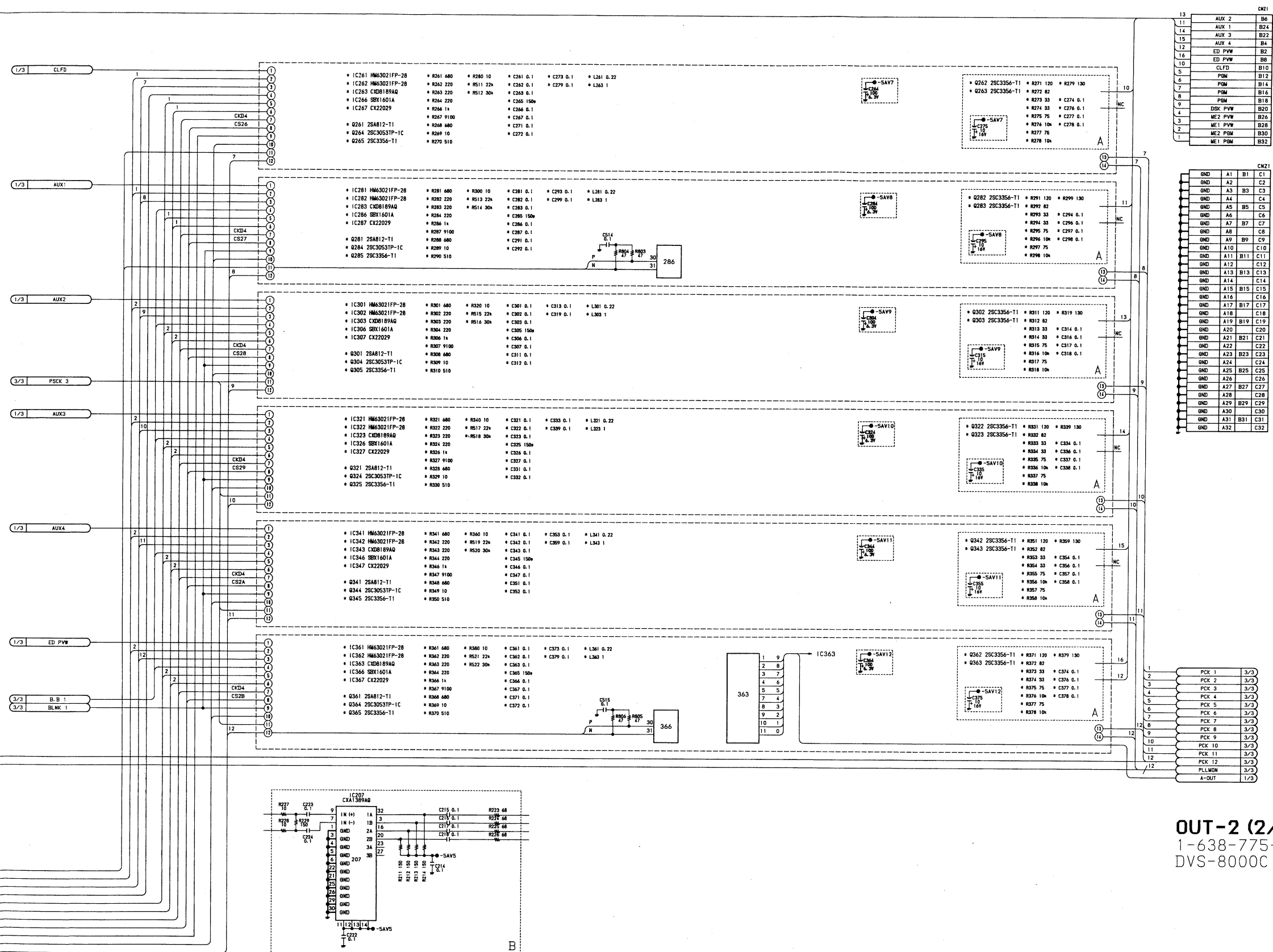
CHV1	
9	PWM OUT 9 B23
8	PWM OUT 8 A23
7	PWM OUT 7 B24
6	PWM OUT 6 A24
5	PWM OUT 5 B25
4	PWM OUT 4 A25
3	PWM OUT 3 B26
2	PWM OUT 2 A26
1	PWM OUT 1 B27
0	PWM OUT 0 A27

AUX1	2/3
AUX4	2/3
ED	2/3
PW	2/3
AUX2	2/3
AUX3	2/3
PGM1	2/3
PGM2	2/3
PWM1	2/3
PWM2	2/3
PWMP	2/3
PGMP	2/3
CLFD	2/3

OUT-2 (1/3)
1-638-775-11
DVS-8000C

OUT-2 OUTPUT PROCESSOR BOARD





OUT-2 (2/3)
1-638-775-11
DVS-8000C

OUT-2 OUTPUT PROCESSOR BOARD

1

2/3	PCK 1	1
2/3	PCK 2	2
2/3	PCK 3	3
2/3	PCK 4	4
2/3	PCK 5	5
2/3	PCK 6	6
2/3	PCK 7	7
2/3	PCK 8	8
2/3	PCK 9	9
2/3	PCK 10	10
2/3	PCK 11	11
2/3	PCK 12	12

CN1	CKD1H	1
B4	CKD1L	2
C3	ADD1H	3
B3	ADD1L	4
CN1	MDATA1H	5
B2	MDATA1L	6

CN1	MDATA1H	1
B1	MDATA1L	2

CN1	SLAD 4	1
C7	SLAD 3	2
B7	SLAD 2	3
A7	SLAD 1	4
A8	SLAD 0	5

CN1	THRM	1
A6	THRM	2

CN1	RST	1
D4	CKX	2
CN1	CK Q7M	3
D9	CK 113.5M	4

CN1	H BLK	1
D5	VD	2
D6	VD	3

CN1	B.B 9	1
A18	B.B 8	2
A17	B.B 7	3
B16	B.B 6	4
A16	B.B 5	5
B15	B.B 4	6
A15	B.B 3	7
B14	B.B 2	8
A14	B.B 1	9
B13	B.B 0	10
A13	B.B 0	11
A5	FUSE (H)	12

CN1	A1	1
A2	A2	2
A3	A3	3
A4	A4	4
A31	GND	5
A32	GND	6
B32	GND	7
D1	-5V	8
D2	-5V	9

CN1	FUSE (F)	1
A31	GND	2
B31	GND	3
A32	GND	4
B32	GND	5

2/3	PLL MON	1
-----	---------	---

2

3

4

5

A

B

C

D

E

F

G

H

B-SYX121-OUT2#3

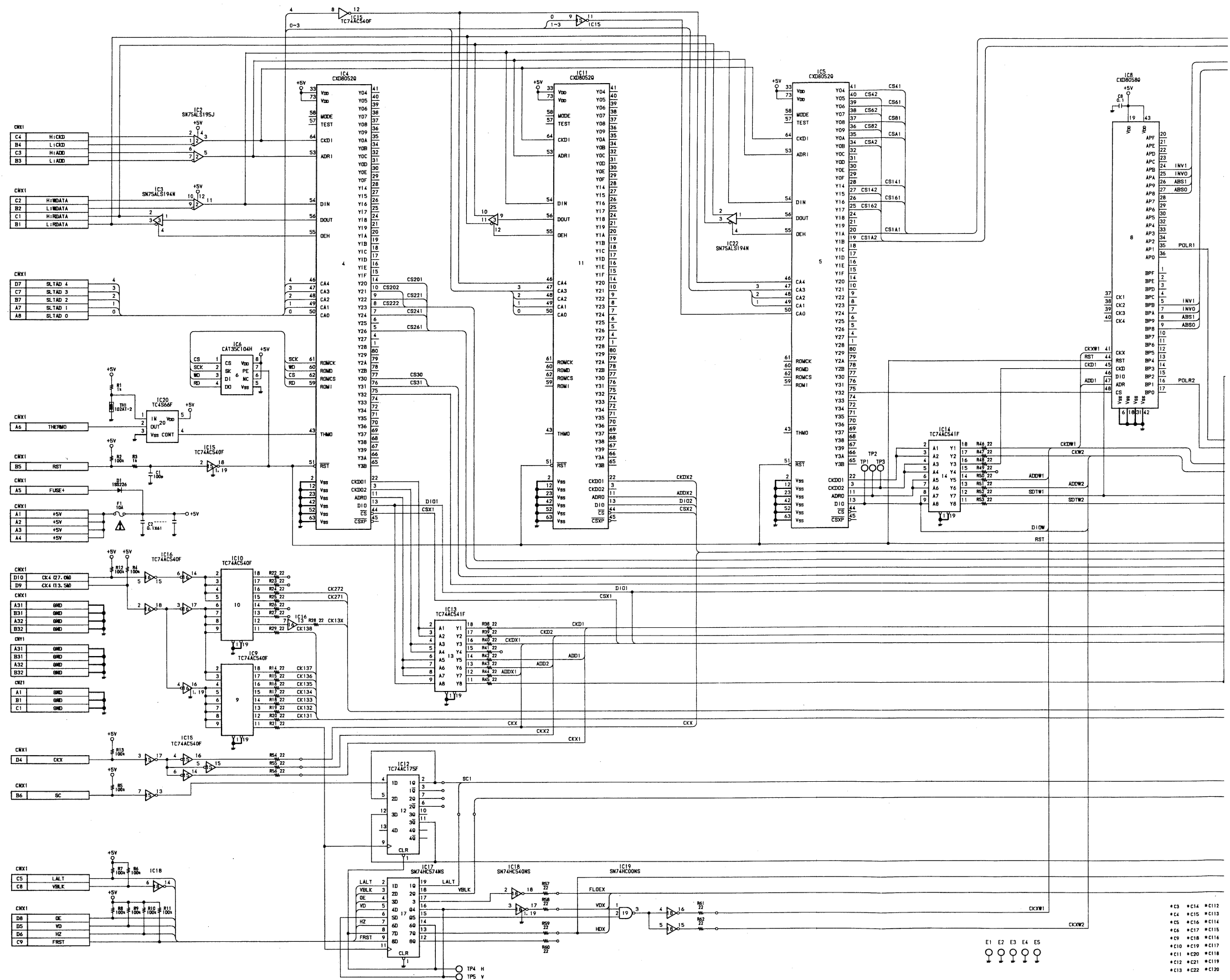
9-275

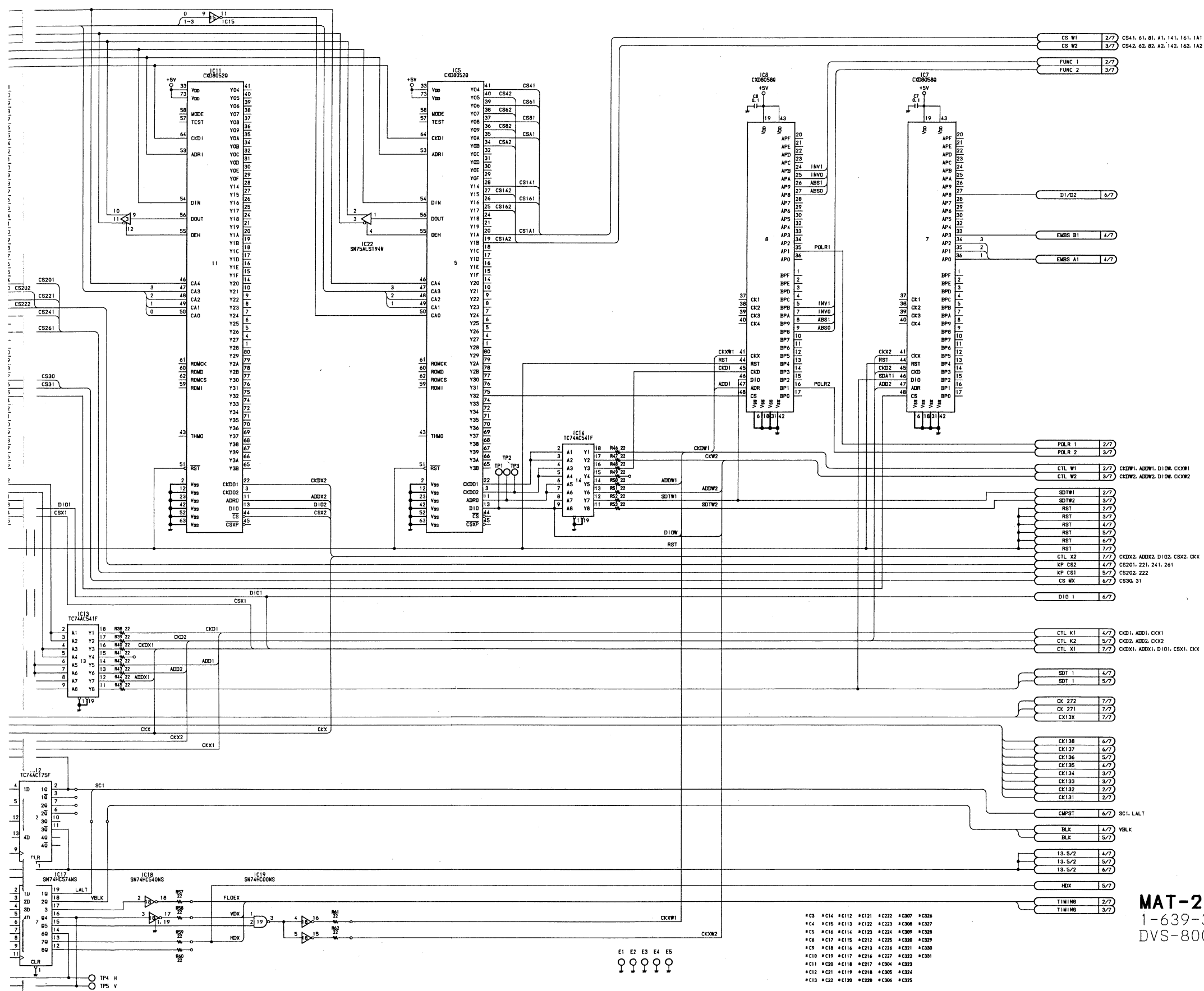
9-276

OUT-2 (3/3)
1-638-775-11
DVS-8000C

*C1 0.1 *C11 0.1 *C19 0.1 *C27 0.1 *C40 0.1 *C415 0.1 *C423 0.1 *C431 0.1
*C2 0.1 *C12 0.1 *C20 0.1 *C28 0.1 *C36 0.1 *C416 0.1 *C424 0.1 *C432 0.1
*C3 0.1 *C13 0.1 *C21 0.1 *C29 0.1 *C37 0.1 *C417 0.1 *C425 0.1 *C433 0.1
*C4 0.1 *C14 0.1 *C22 0.1 *C30 0.1 *C38 0.1 *C418 0.1 *C426 0.1 *C434 0.1
*C5 0.1 *C15 0.1 *C23 0.1 *C31 0.1 *C39 0.1 *C419 0.1 *C427 0.1 *C435 0.1
*C6 0.1 *C16 0.1 *C24 0.1 *C40 0.1 *C42 0.1 *C420 0.1 *C428 0.1 *C436 0.1
*C7 0.1 *C17 0.1 *C25 0.1 *C41 0.1 *C43 0.1 *C421 0.1 *C429 0.1
*C8 0.1 *C18 0.1 *C26 0.1 *C42 0.1 *C44 0.1 *C422 0.1 *C430 0.1

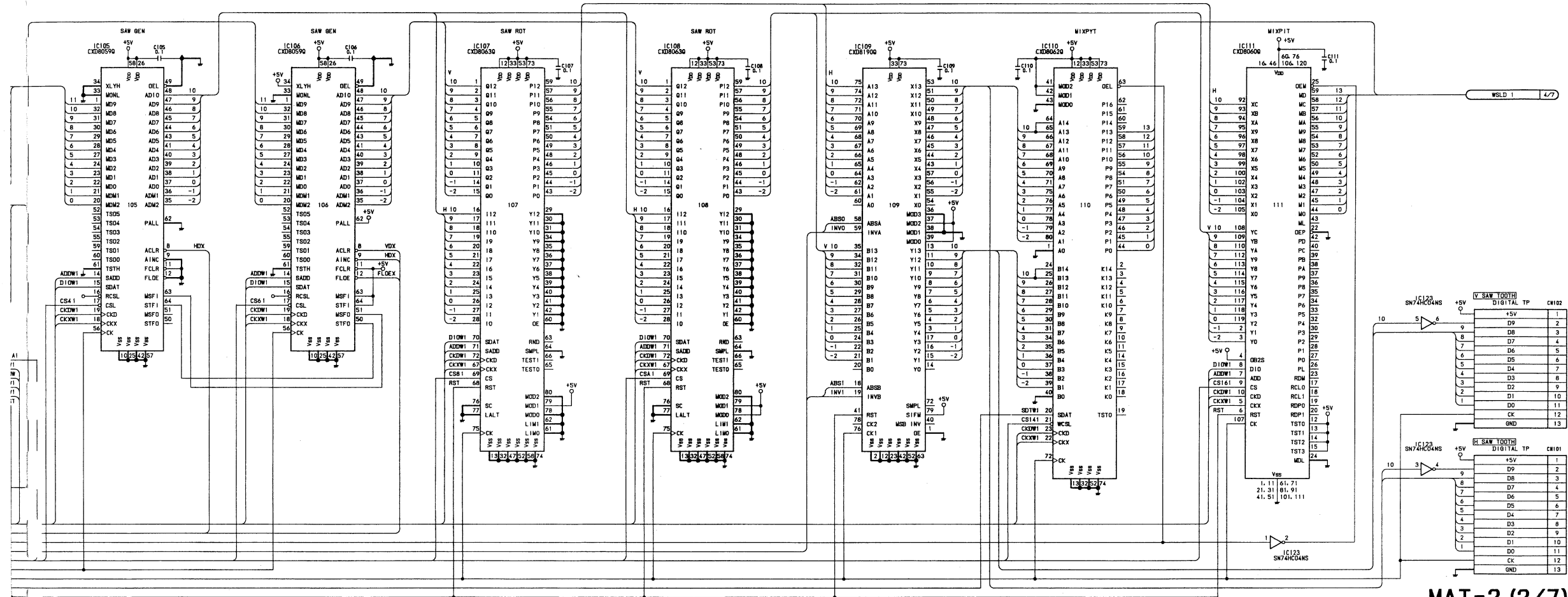
MAT-2 MATTE GENERATOR BOARD





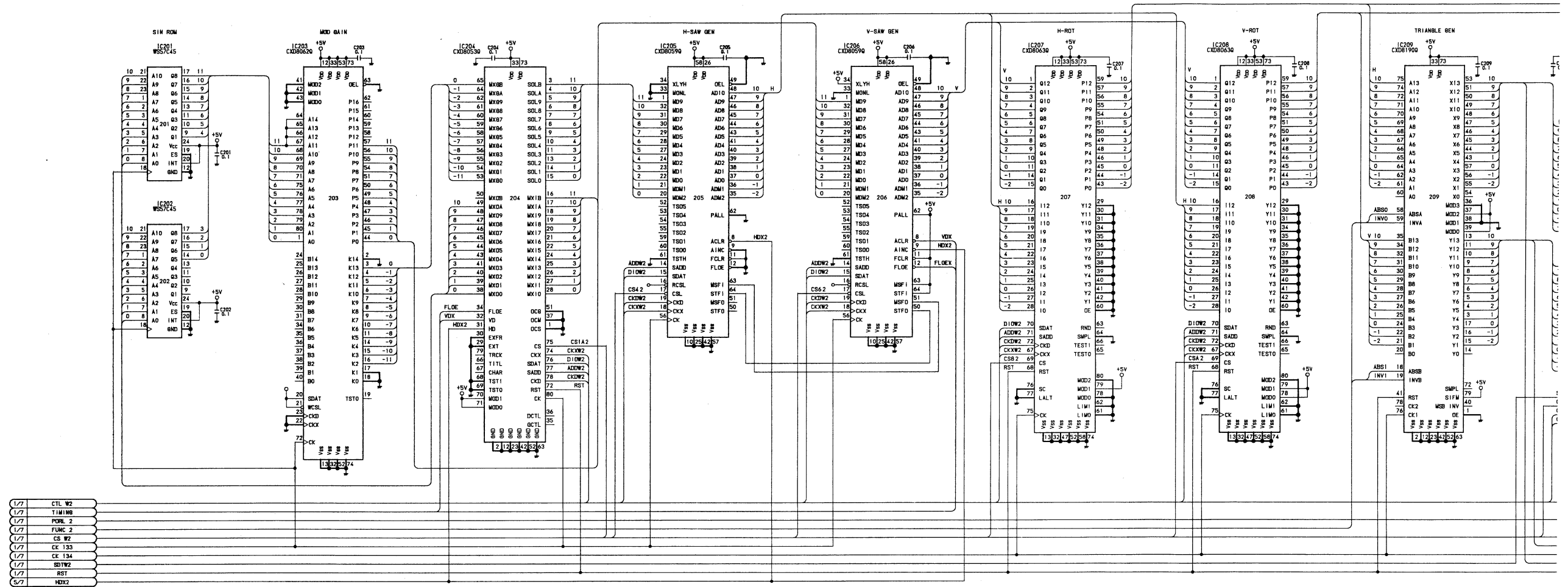
5

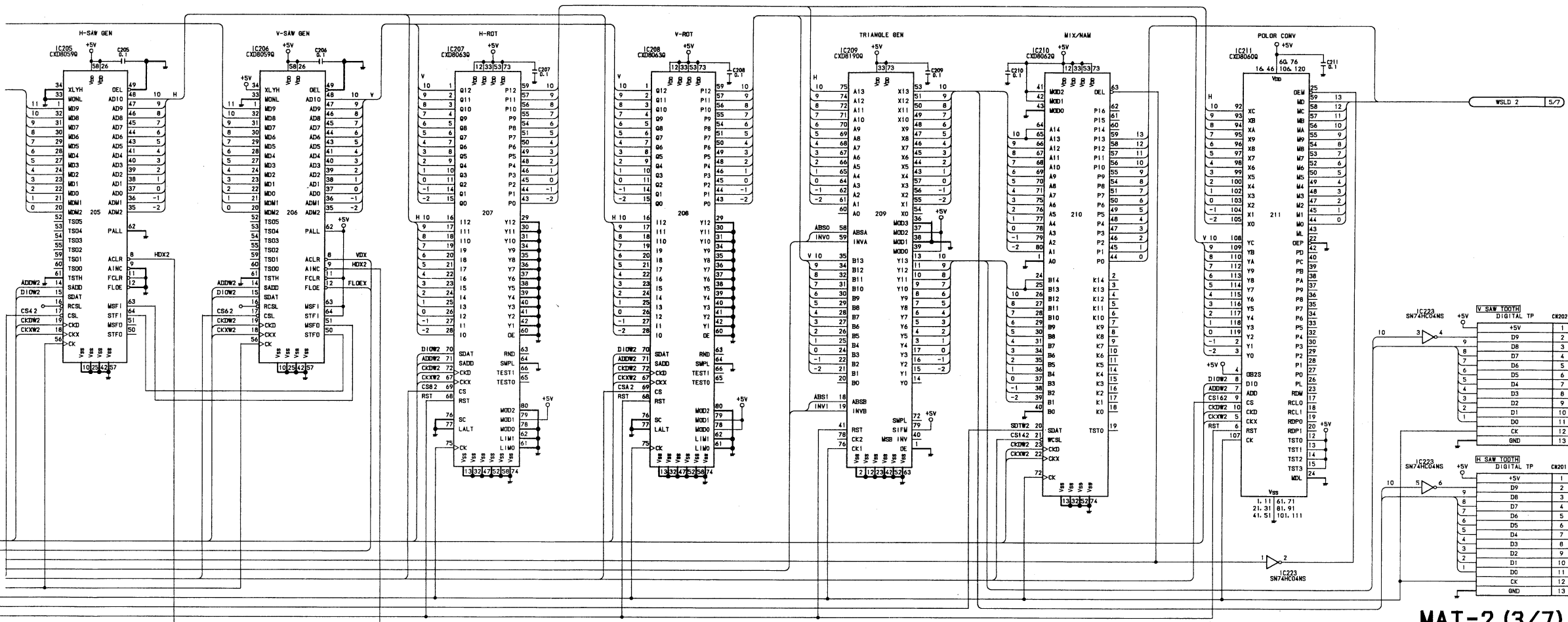




MAT-2 (2/7)
1-639-397-11
DVS-8000C

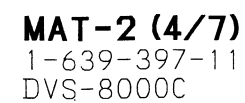
MAT-2 MATTE GENERATOR BOARD



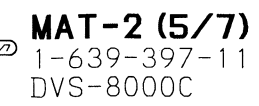


MAT-2 (3/7)
1-639-397-11
DVS-8000C

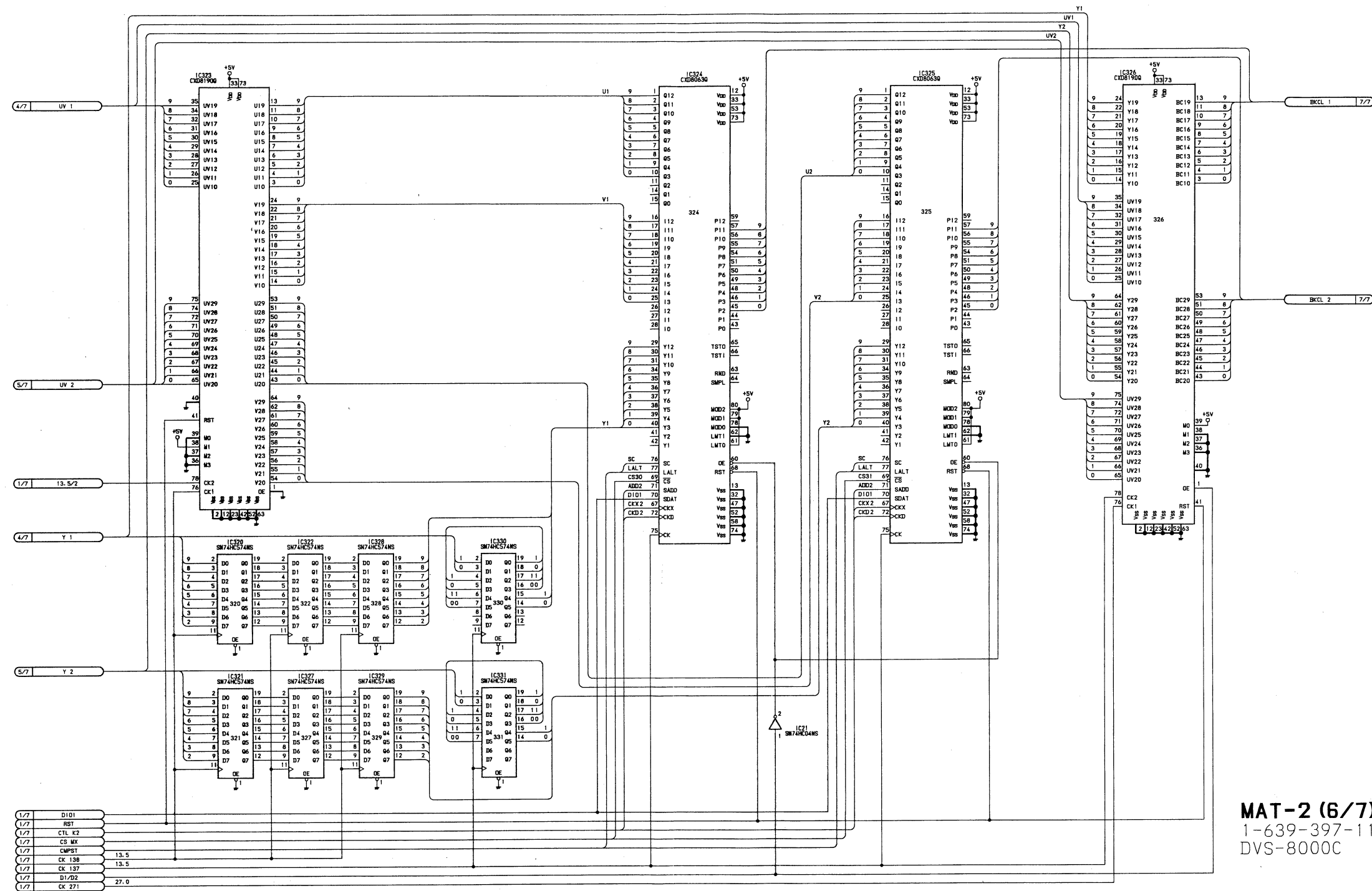
□



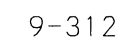
5

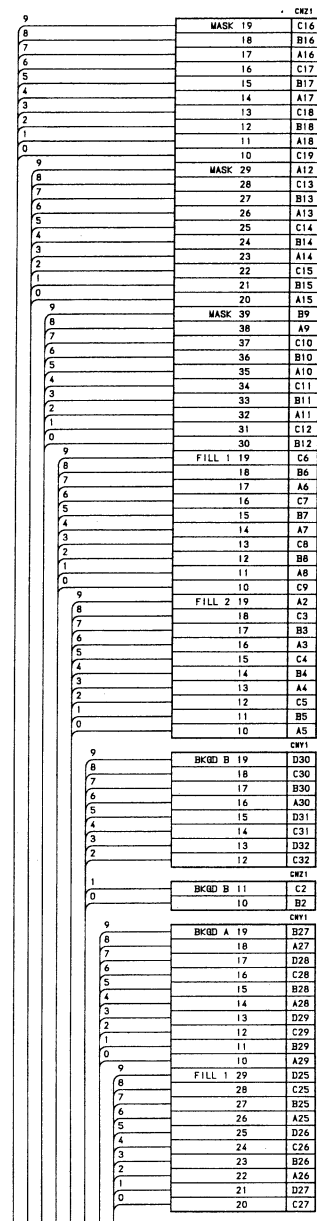
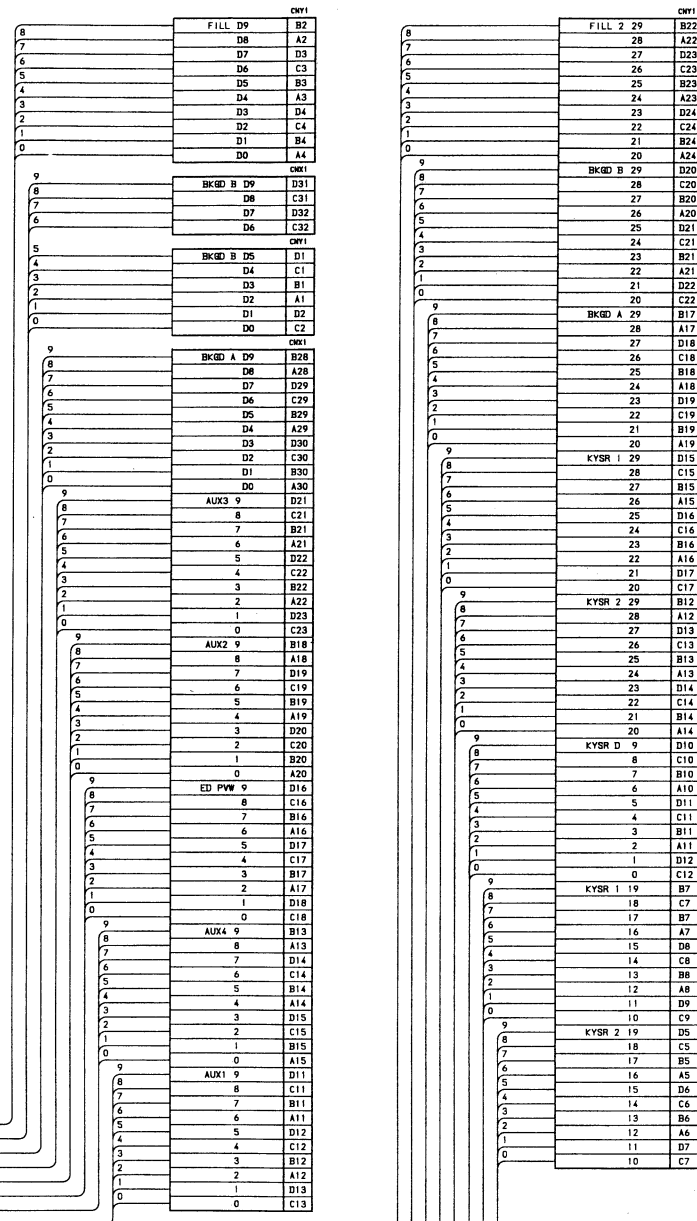
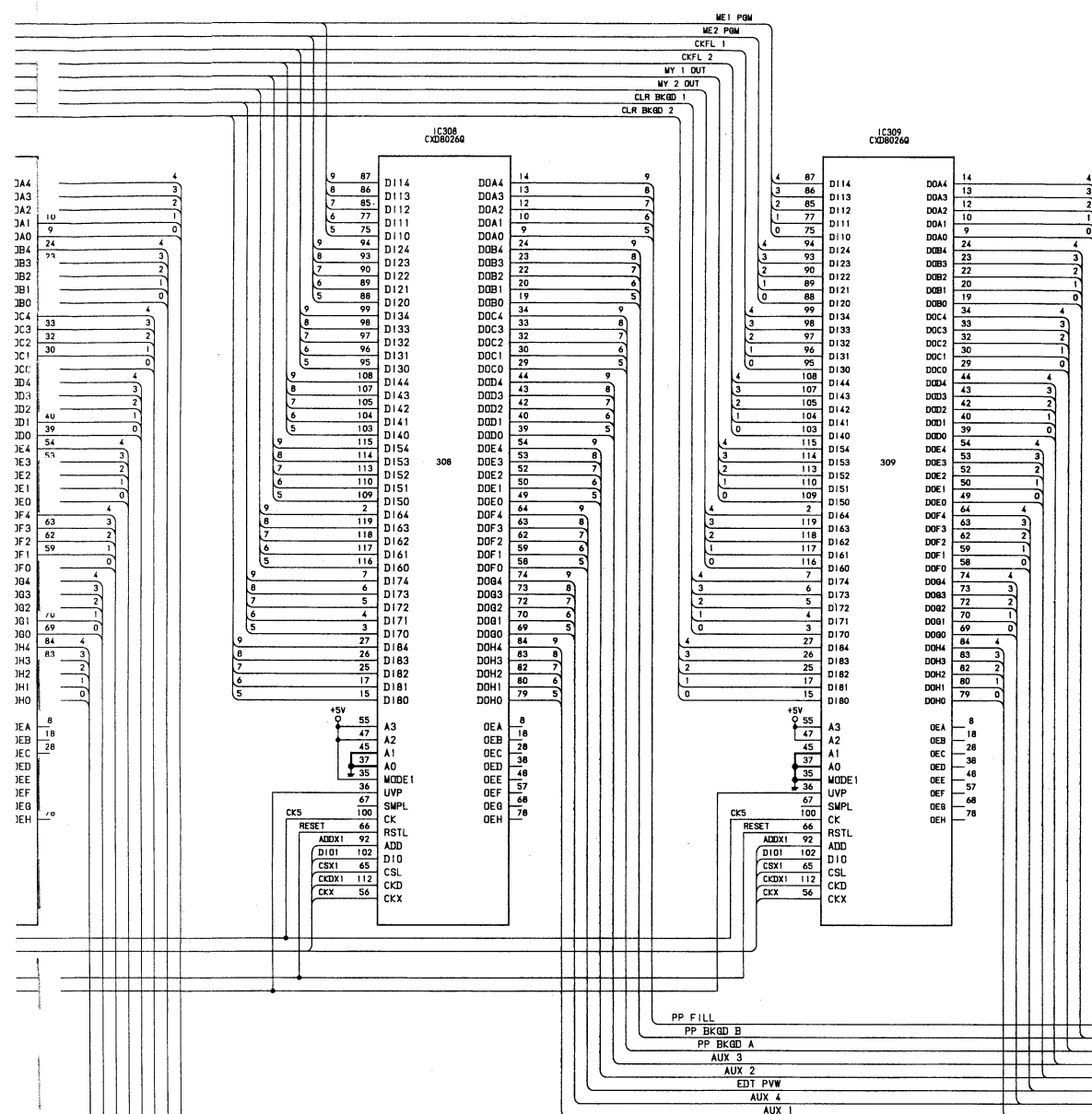


MAT-2 MATTE GENERATOR BOARD



MAT-2 (6/7)
1-639-397-11
DVS-8000C

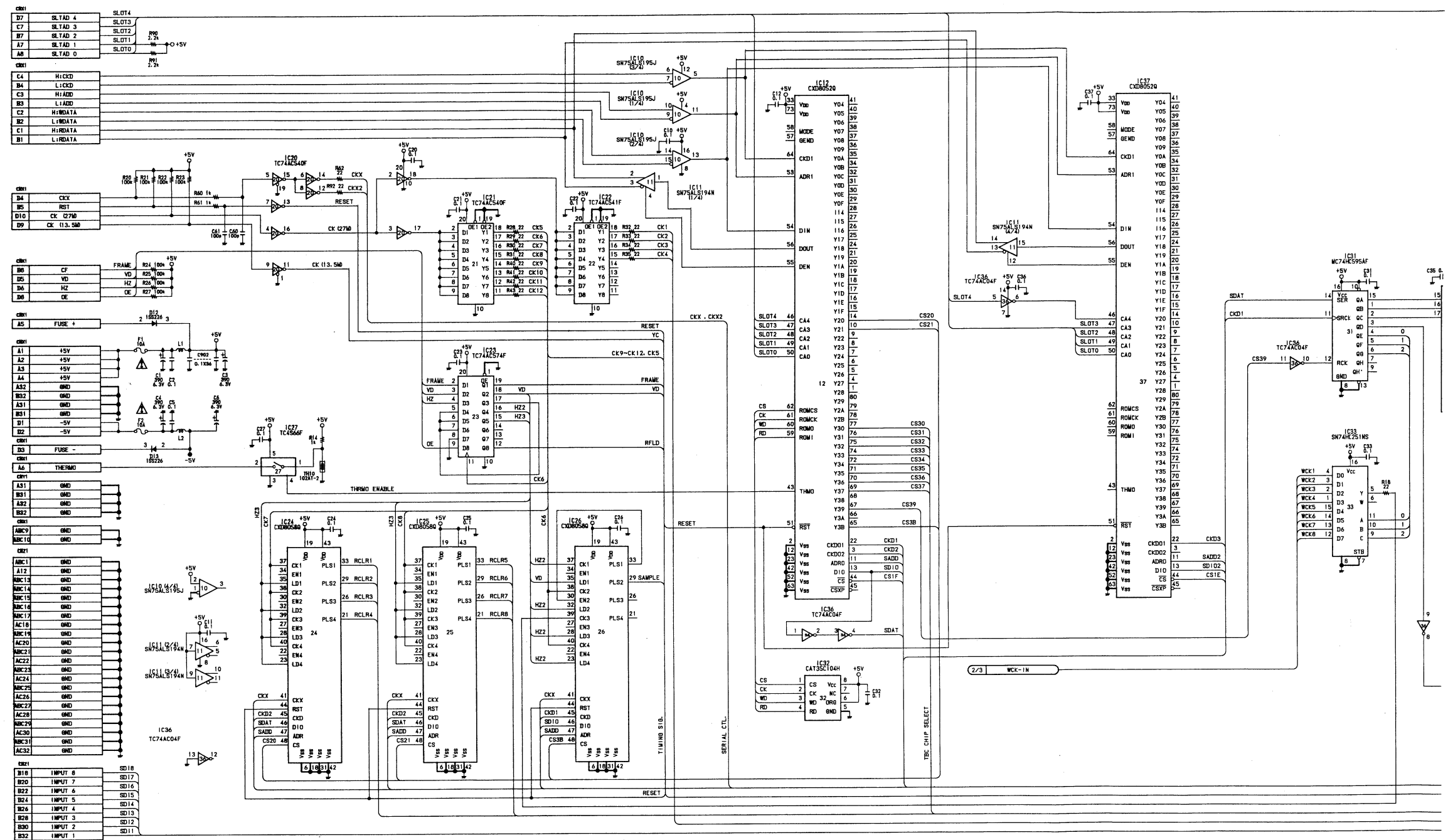


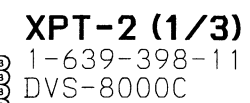


IC904, 905, 906, 907
VDD: 16, 46, 60, 76, 106, 120
VSS: 1, 11, 21, 31, 41, 51, 61,
71, 81, 91, 101, 111

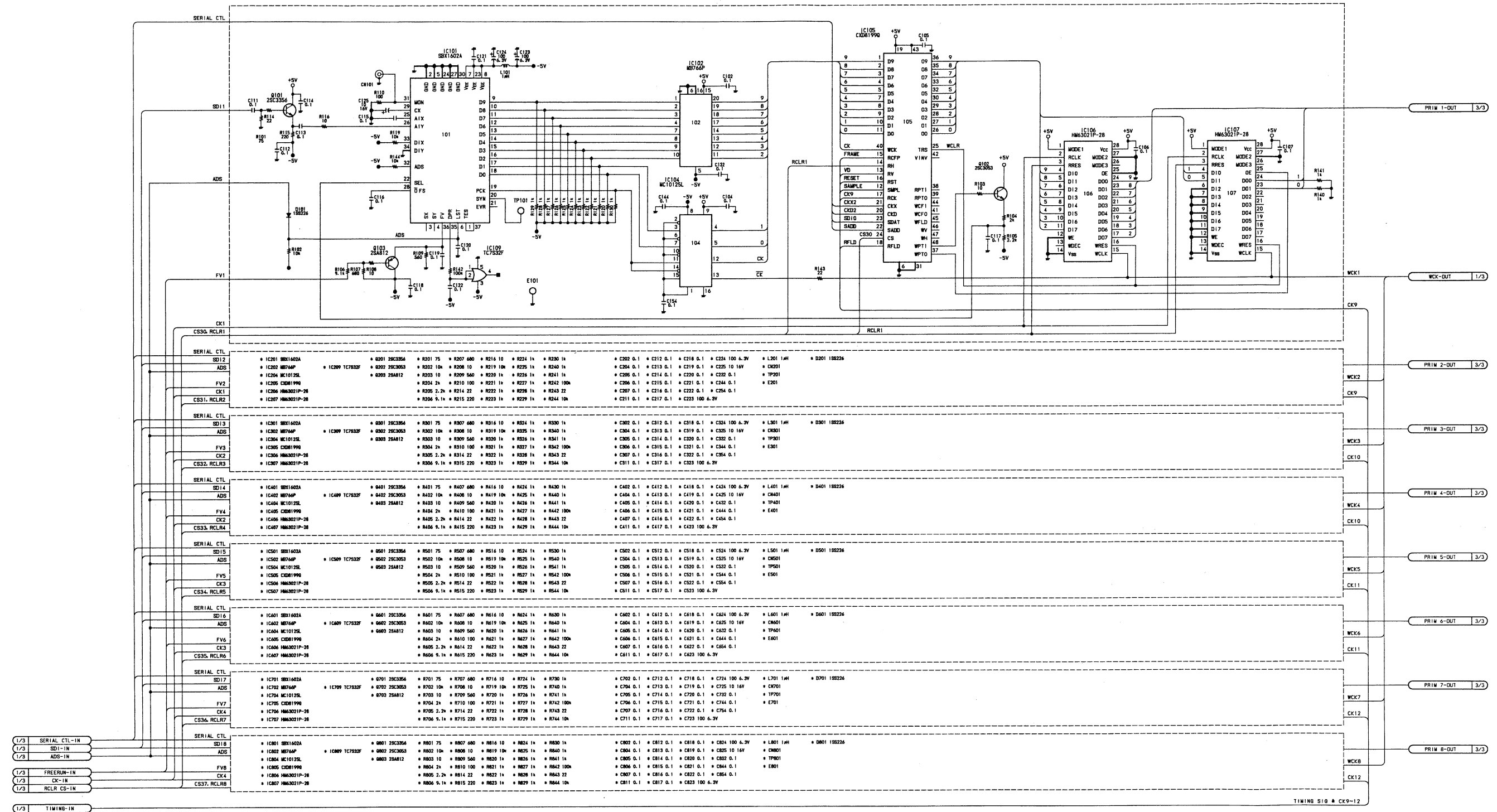
MAT-2 (7/7)
1-639-397-11
DVS-8000C

5



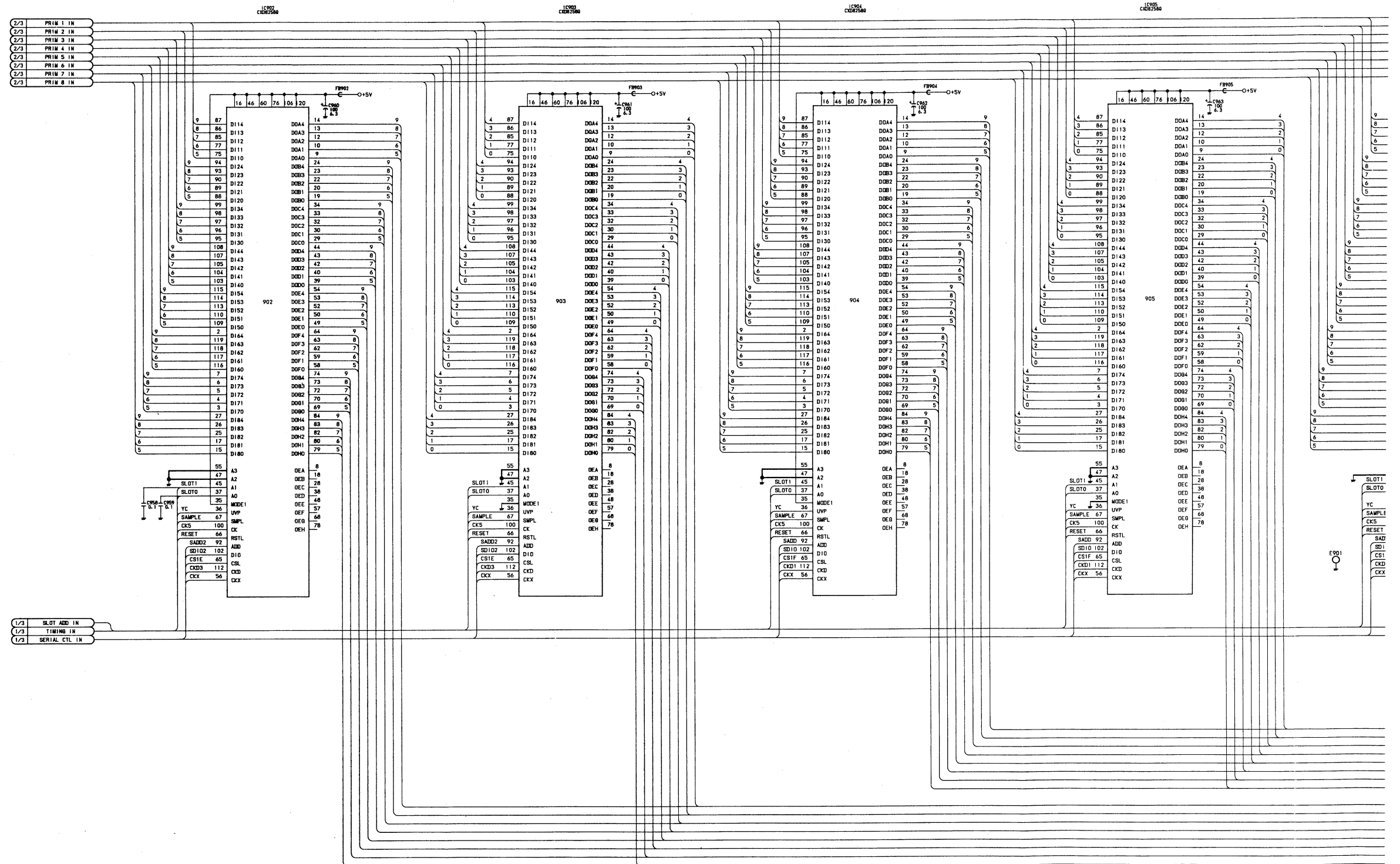


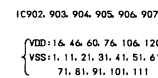
XPT-2 DIGITAL INPUT BOARD



XPT-2 (2/3)
1-639-398-11
DVS-8000C

XPT-2 DIGITAL INPUT BOARD

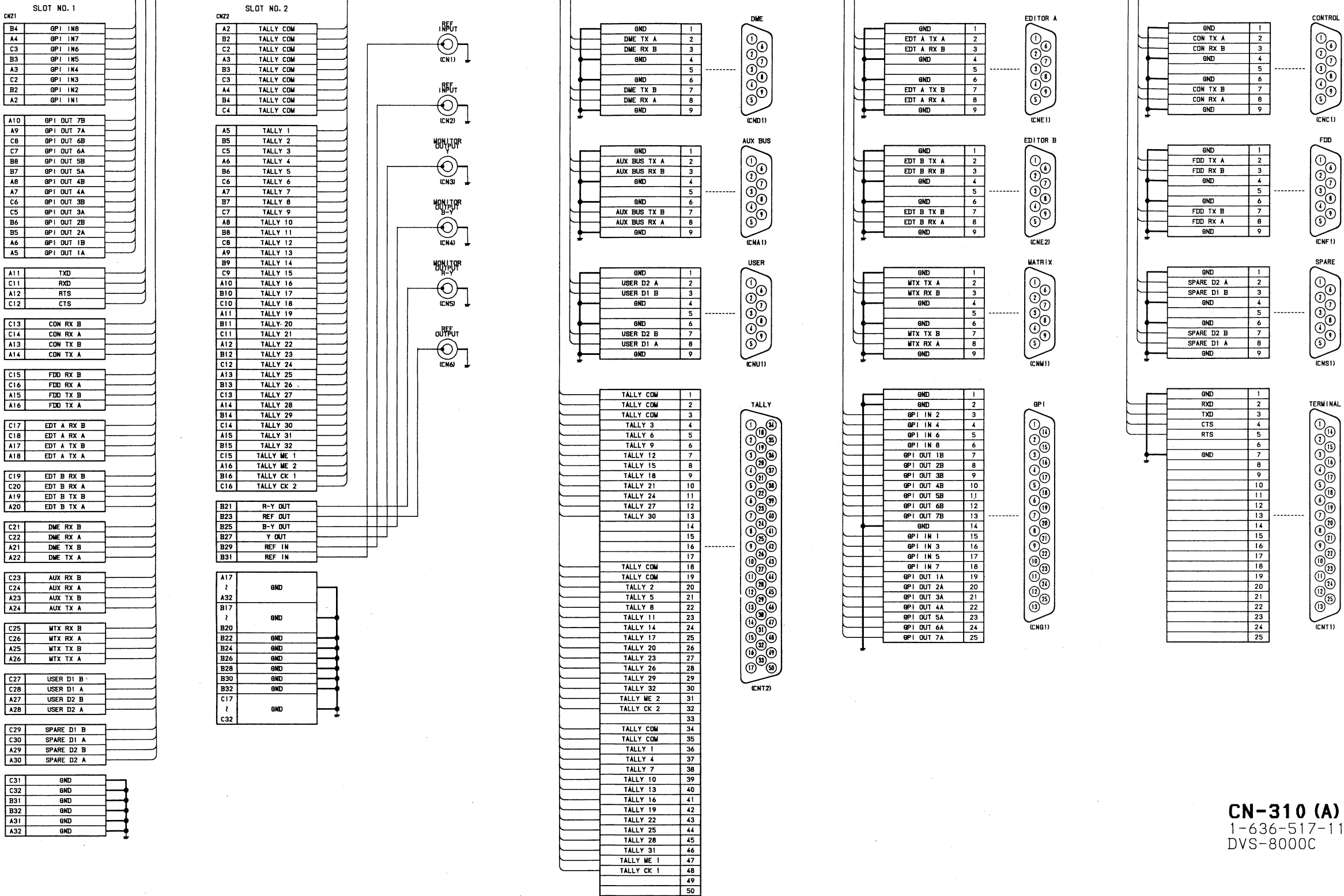




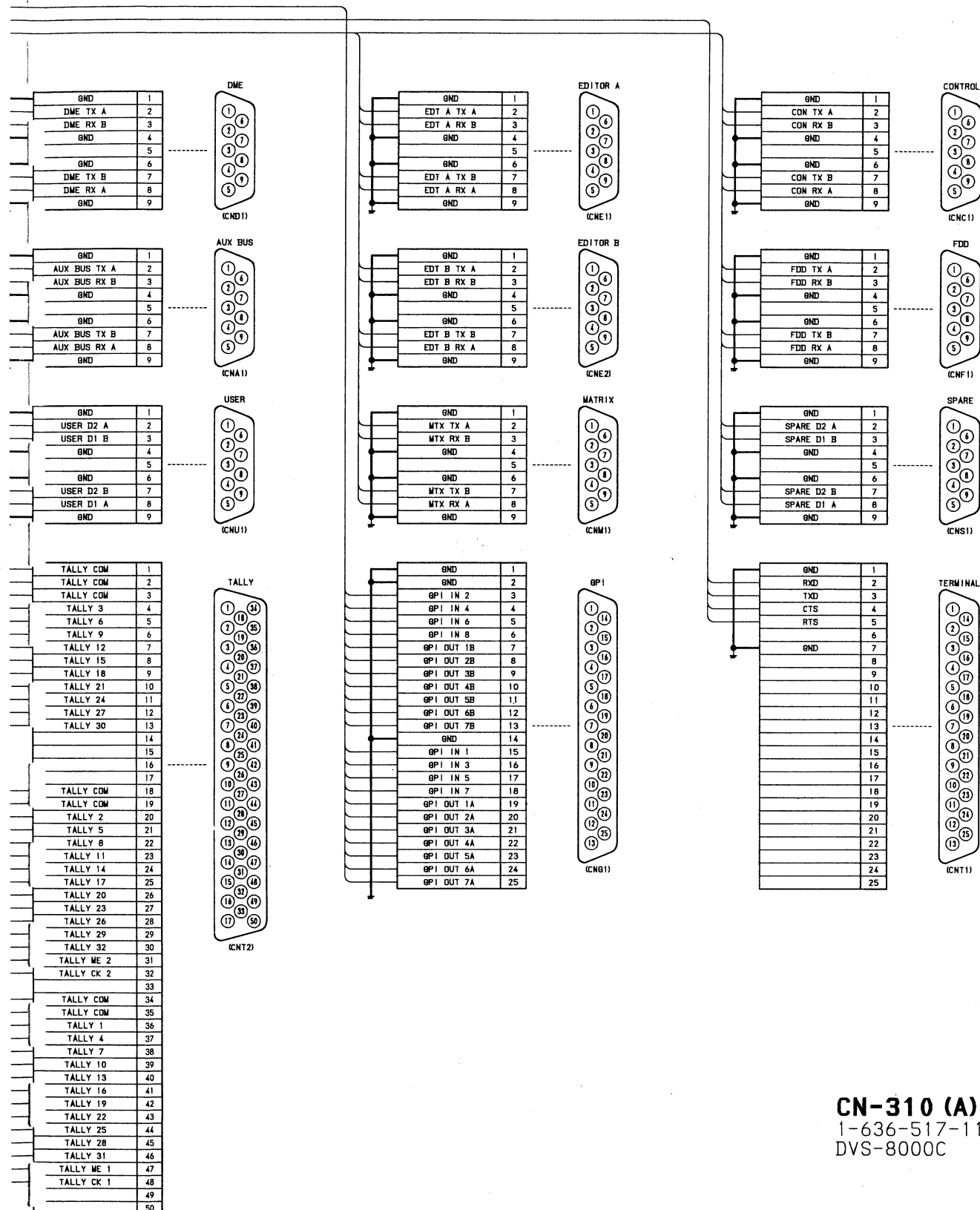
9-332

CN-310 (A) CONTROL CONNECTOR BOARD

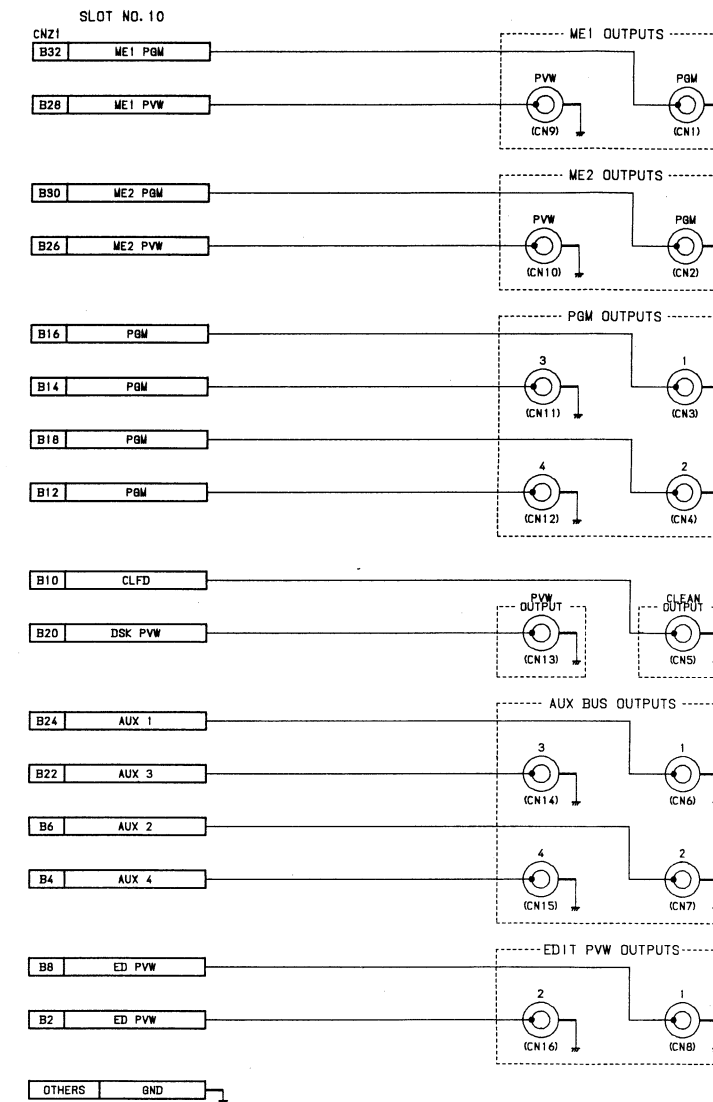
CN



CN-311 OUTPUT CONNECTOR BOARD



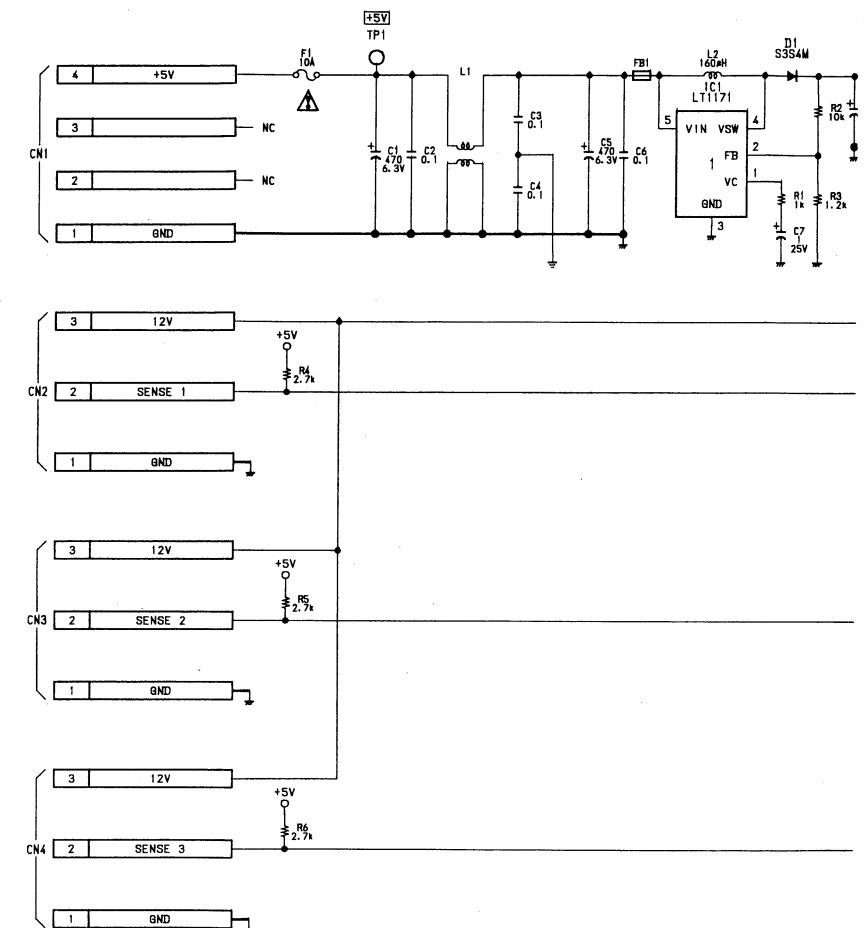
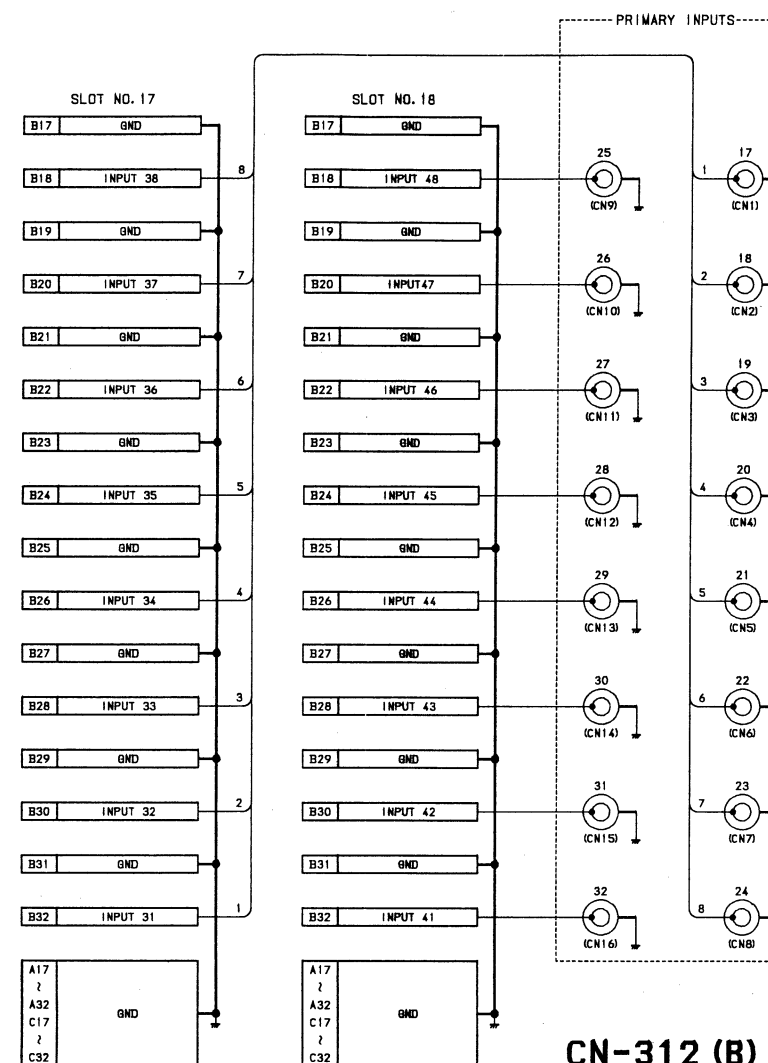
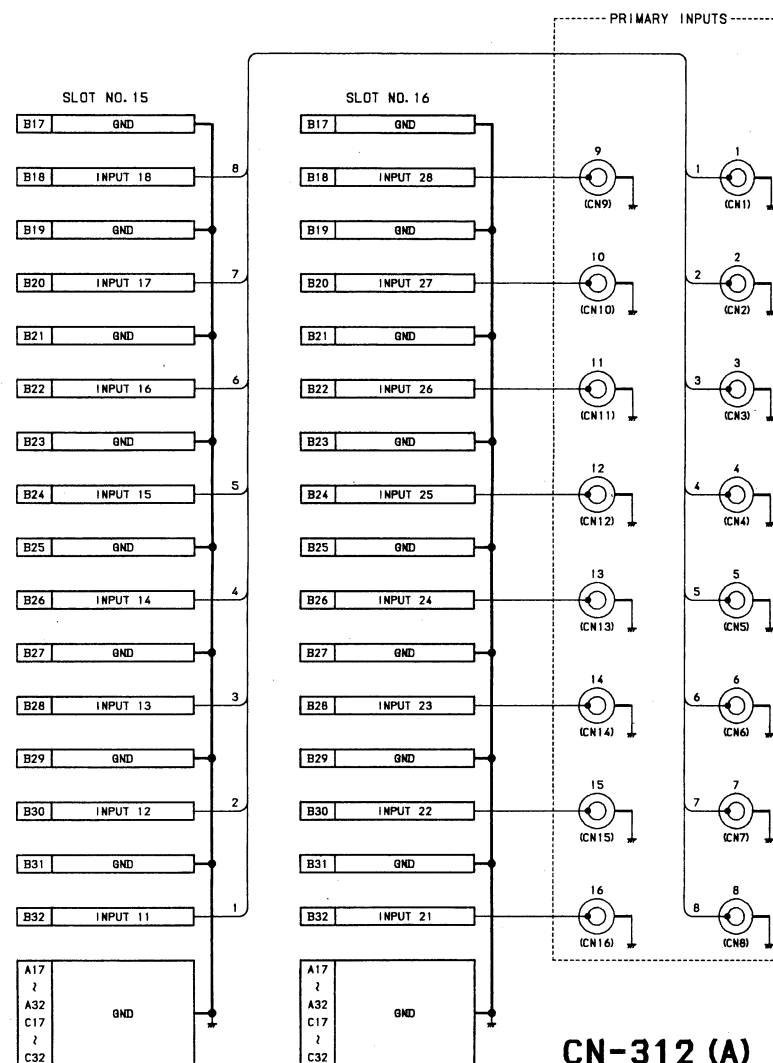
CN-310 (A)
1-636-517-11
DVS-8000C



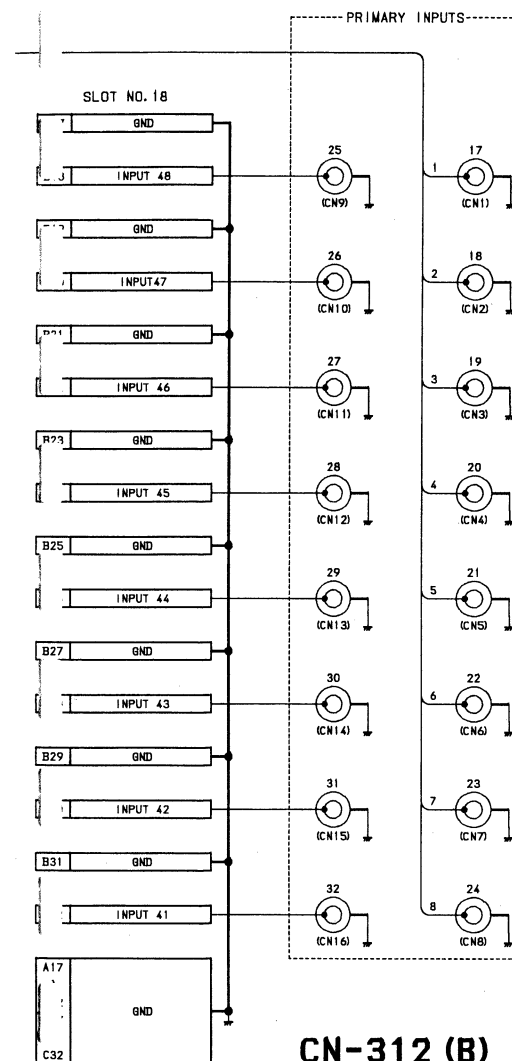
CN-311
1-636-519-12
DVS-8000
DVS-8000C

CN-312 (A) PRIMARY INPUT CONNECTOR BOARD
CN-312 (B) PRIMARY INPUT CONNECTOR BOARD

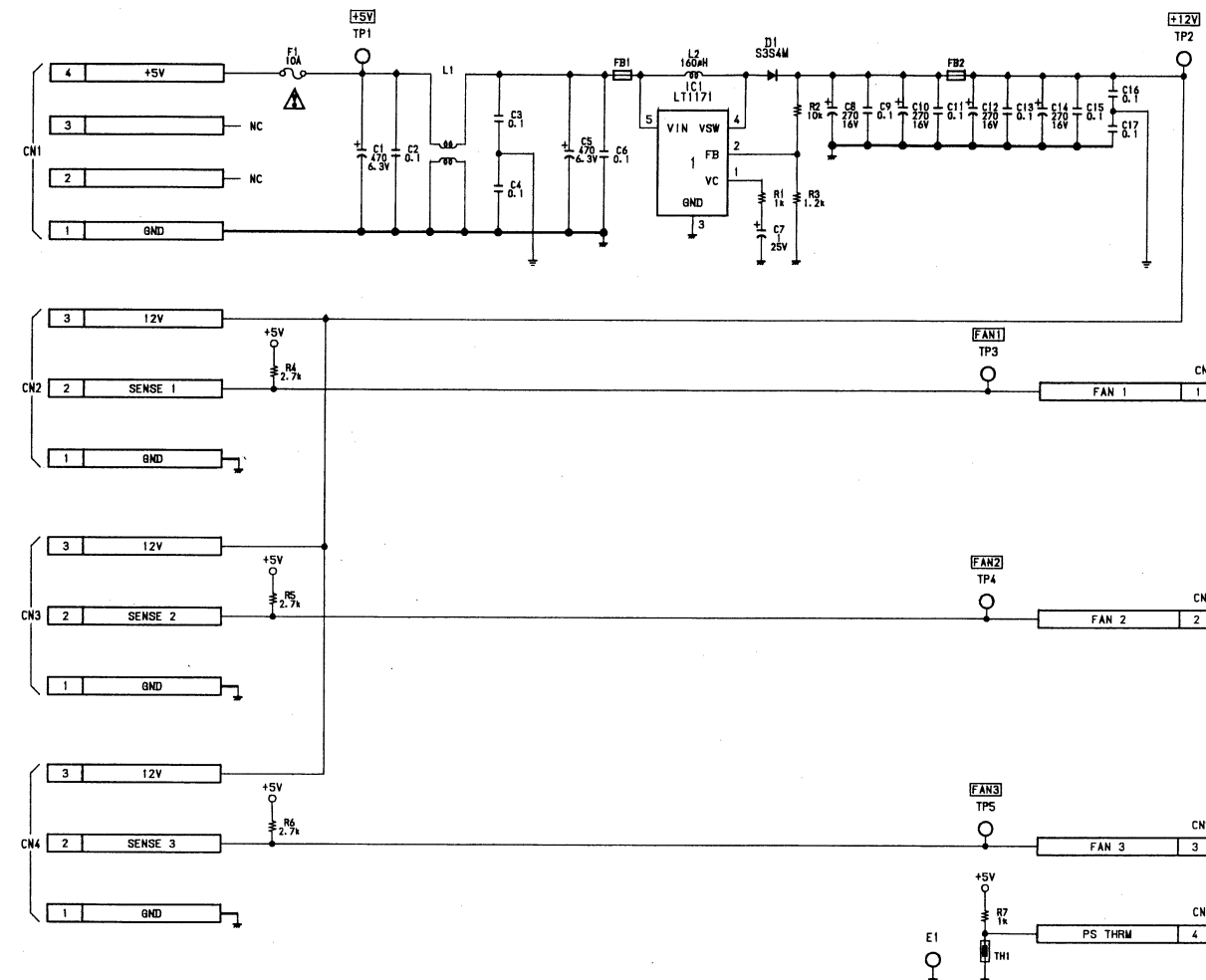
CN-456 POWER SUPPLY CONNECTOR BOARD



CN-456 POWER SUPPLY CONNECTOR BOARD



CN-312 (B)
 1-636-520-12
 DVS-8000
 DVS-8000C



MB-393 MOTHER BOARD

(08)

CPU-57

(09)

SG-189

(10)

WKG-5

(11)

WKG-4

CN1

1	PS 1HM
2	GND
3	FAN 1
4	FAN 2
5	FAN 3

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF		OE
9	VCNT A6	VCNT A7	FAN 2	
10		PS THRM	FAN 3	
11				
12				
13	D1/D2	S25/625	REF EXT	CKX CPU
14	COM 68	COM 69	COM 70	HD
15	COM 64	COM 65	COM 66	VZ
16	+5V MON	DIG/ANA	ADV/DLY	CF IN
17	SG STATUS	COM 57	COM 58	COM 59
18	COM 52	COM 53	COM 54	COM 55
19	COM 48	COM 49	COM 50	COM 51
20	COM 44	COM 45	COM 46	COM 47
21	COM 40	COM 41	COM 42	COM 43
22	COM 36	COM 37	COM 38	COM 39
23	COM 32	COM 33	COM 34	COM 35
24	COM 28	COM 29	COM 30	COM 31
25	COM 24	COM 25	COM 26	COM 27
26	COM 20	COM 21	COM 22	COM 23
27	COM 16	COM 17	COM 18	COM 19
28	COM 12	COM 13	COM 14	COM 15
29	COM 08	COM 09	COM 10	COM 11
30	COM 04	COM 05	COM 06	COM 07
31	GND	GND	COM 02	COM 03
32	GND	GND		

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF		OE
9	CK16 (13.5M)	CK15 (13.5M)	CK14 (13.5M)	CK13 (13.5M)
10	CK12 (13.5M)	CK11 (13.5M)	CK10 (13.5M)	CK9 (13.5M)
11	CK4 (27.0M)	CK3 (27.0M)	CK2 (27.0M)	CK1 (27.0M)
12	CK8 (27.0M)	CK7 (27.0M)	CK6 (27.0M)	CK5 (27.0M)
13	D1/D2	S25/625	REF EXT	CKX CPU
14	GND	GND	GND	HD
15	GND	GND	GND	VZ
16	+5V MON	DIG/ANA	ADV/DLY	CF IN
17	SG STATUS	COM 57	COM 58	COM 59
18	COM 52	COM 53	COM 54	COM 55
19	COM 48	COM 49	COM 50	COM 51
20	COM 44	COM 45	COM 46	COM 47
21	COM 40	COM 41	COM 42	COM 43
22	COM 36	COM 37	COM 38	COM 39
23	COM 32	COM 33	COM 34	COM 35
24	COM 28	COM 29	COM 30	COM 31
25	COM 24	COM 25	COM 26	COM 27
26	COM 20	COM 21	COM 22	COM 23
27	COM 16	COM 17	COM 18	COM 19
28	COM 12	COM 13	COM 14	COM 15
29	COM 08	COM 09	COM 10	COM 11
30	COM 04	COM 05	COM 06	COM 07
31	GND	GND	COM 02	COM 03
32	GND	GND		

X

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF		OE
9	GND	GND	GND	CK9 (13.5M)
10	GND	GND	GND	CK1 (27.0M)
11				
12				
13				
14	COM 68	COM 69	COM 70	COM 71
15	COM 64	COM 65	COM 66	COM 67
16	COM 60	COM 61	COM 62	COM 63
17	COM 56	COM 57	COM 58	COM 59
18	COM 52	COM 53	COM 54	COM 55
19	COM 48	COM 49	COM 50	COM 51
20	COM 44	COM 45	COM 46	COM 47
21	LSLD 110	LSLD 111	LSLD 112	LSLD 113
22	LSLD 16	LSLD 17	LSLD 18	LSLD 19
23	LSLD 12	LSLD 13	LSLD 14	LSLD 15
24	LSLD 212	LSLD 213	LSLD 10	LSLD 11
25	LSLD 28	LSLD 29	LSLD 210	LSLD 211
26	LSLD 24	LSLD 25	LSLD 26	LSLD 27
27	LSLD 20	LSLD 21	LSLD 22	LSLD 23
28	LSLD 310	LSLD 311	LSLD 312	LSLD 313
29	LSLD 36	LSLD 37	LSLD 38	LSLD 39
30	LSLD 32	LSLD 33	LSLD 34	LSLD 35
31	GND	GND	LSLD 30	LSLD 31
32	GND	GND		

Y

	A	B	C	D
1				
2				
3				
4				
5				
6				
7				
8	WSLD 112	WSLD 113		
9	WSLD 18	WSLD 19	WSLD 110	WSLD 111
10	WSLD 14	WSLD 15	WSLD 16	WSLD 17
11	WSLD 10	WSLD 11	WSLD 12	WSLD 13
12	WSLD 210	WSLD 211	WSLD 212	WSLD 213
13	WSLD 26	WSLD 27	WSLD 28	WSLD 29
14	WSLD 22	WSLD 23	WSLD 24	WSLD 25
15	WSLD 312	WSLD 313	WSLD 20	WSLD 21
16	WSLD 38	WSLD 39	WSLD 310	WSLD 311
17	WSLD 34	WSLD 35	WSLD 36	WSLD 37
18	WSLD 30	WSLD 31	WSLD 32	WSLD 33
19				
20				
21				
22				
23				
24				
25				
26	CPU 30	CPU 31	CPU 32	CPU 33
27	CPU 26	CPU 27	CPU 28	CPU 29
28	CPU 22	CPU 23	CPU 24	CPU 25
29	CPU 18	CPU 19	CPU 20	CPU 21
30	CPU 14	CPU 15	CPU 16	CPU 17
31	GND	GND		WKG5 IN
32	GND	GND		

Z

	A	B	C
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
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25			
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27			
28			
29			
30			
31			
32			

	A	B	C	D
1	A16	A17	A18	A19
2	A12	A13	A14	A15
3	A08	A09	A10	A11
4	A04	A05	A06	A07
5	A00	A01	A02	A03
6	MEMHH:L	MEMHL:L	MEMLH:L	MEMLL:L
7	READ:L	WRITE:L	DS:L	
8	CPU 95	CPU 94	WBVS:N:L	R/W
9	SBUSEN:L	CLR80B:L	CLR80C:L	RESET:L
10	CLK25M	STOCCS:L	CTCCS:L	
11	PLO2CS:L	CLK9.6K	CPU 92	CPU 93
12	CPU 86	CPU 87	CPU 88	CPU 89
13	CPU 82	CPU 83	CPU 84	CPU 85
14	CPU 78	CPU 79	CPU 80	CPU 81
15	CPU 74	CPU 75	CPU 76	CPU 77
16	CPU 70	CPU 71	CPU 72	CPU 73
17	CPU 66	CPU 67	CPU 68	CPU 69
18			CPU 64	CPU 65
19			CTCIRQ3	SI0IRQ3
20			SI0IRQ6	SBACK:L
21			CPU 52	CPU 53
22			CPU 48	CPU 49
23			D30	D31
24			D26	D27
25			D22	D23
26			D18	D19
27			D14	D15
28			D10	D11
29			D06	D07
30	TXD	RXD	RTS	CTS
31	GND	GND		
32	GND	GND		

	A	B	C
1	GND	GND	GND
2	GPI IN 1	GPI IN 2	GPI IN 3
3	GPI IN 4	GPI IN 5	GPI IN 6
4	GPI IN 7	GPI IN 8	
5	GPI OUT 1A	GPI OUT 2A	GPI OUT 3A
6	GPI OUT 1B	GPI OUT 2B	GPI OUT 3B
7	GPI OUT 4A	GPI OUT 5A	GPI OUT 6A
8	GPI OUT 4B	GPI OUT 5B	GPI OUT 6B
9	GPI OUT 7A		
10	GPI OUT 7B		
11	TXD		RXD
12	CTS		
13	CON TX B		CON RX B
14	CON TX A		CON RX A
15	FDD TX B		FDD RX B
16	FDD TX A		FDD RX A
17	EDT A TX B		EDT A RX B
18	EDT A TX A		EDT A RX A
19	EDT B TX B		EDT B RX B
20	EDT B TX A		EDT B RX A
21	DME TX B		DME RX B
22	DME TX A		DME RX A
23	AUX TX B		AUX RX B
24	AUX TX A		AUX RX A
25	MTX TX B		MTX RX B
26	MTX TX A		MTX RX A
27	USER D2 B		USER D1 B
28	USER D2 A		USER D1 A
29	SPARE D2 B		SPARE D1 B
30	SPARE D2 A		SPARE D1 A
31	GND	GND	GND
32	GND	GND	GND

1
CPU2
SG3
ENHANCED WIPE4
BASIC WIPE

MB-393 (1/5)

1-639-399-11
DVS-8000C

9-347

9-348

MB-393 MOTHER BOARD

(12)
KPC-1

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HLBK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK10 (13.5M)
10	GND	GND	GND	CK2 (27.0M)
11	MEFL 2 18	MEFL 2 19	MEFL 2 16	MEFL 2 17
12	MEFL 2 14	MEFL 2 15	MEFL 2 12	MEFL 2 13
13	MEFL 2 10	MEFL 2 11	MEFL 2 18	MEFL 2 19
14	MEFL 1 16	MEFL 1 17	MEFL 1 14	MEFL 1 15
15	MEFL 1 12	MEFL 1 13	MEFL 1 10	MEFL 1 11
16	KYSR 2 18	KYSR 2 19	KYSR 2 16	KYSR 2 17
17	KYSR 2 14	KYSR 2 15	KYSR 2 12	KYSR 2 13
18	KYSR 2 10	KYSR 2 11	KYSR 2 18	KYSR 2 19
19	KYSR 1 16	KYSR 1 17	KYSR 1 14	KYSR 1 15
20	KYSR 1 12	KYSR 1 13	KYSR 1 10	KYSR 1 11
21	MEBG A 18	MEBG A 19	MEBG A 16	MEBG A 17
22	MEBG A 14	MEBG A 15	MEBG A 12	MEBG A 13
23	MEBG A 10	MEBG A 11	MEBG A 18	MEBG A 19
24	MEBG B 16	MEBG B 17	MEBG B 14	MEBG B 15
25	MEBG B 12	MEBG B 13	MEBG B 10	MEBG B 11
26	CRKY 18	CRKY 19	CRKY 16	CRKY 17
27	CRKY 14	CRKY 15	CRKY 12	CRKY 13
28	BKGD A 16	BKGD A 17	BKGD A 14	BKGD A 15
29	BKGD A 12	BKGD A 13	BKGD A 10	BKGD A 11
30	GND	GND	GND	GND
31	GND	GND	GND	GND
32	GND	GND	GND	GND

(13)
MIX-4A

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HLBK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK10 (13.5M)
10	GND	GND	GND	CK2 (27.0M)
11	MEFL 2 18	MEFL 2 19	MEFL 2 16	MEFL 2 17
12	MEFL 2 14	MEFL 2 15	MEFL 2 12	MEFL 2 13
13	MEFL 2 10	MEFL 2 11	MEFL 2 18	MEFL 2 19
14	MEFL 1 16	MEFL 1 17	MEFL 1 14	MEFL 1 15
15	MEFL 1 12	MEFL 1 13	MEFL 1 10	MEFL 1 11
16				
17				
18				
19				
20				
21				
22	MEBG A 16	MEBG A 17	MEBG A 14	MEBG A 15
23	MEBG A 12	MEBG A 13	MEBG A 10	MEBG A 11
24	MEBG B 16	MEBG B 17	MEBG B 14	MEBG B 15
25	MEBG B 12	MEBG B 13	MEBG B 10	MEBG B 11
26	CRKY 18	CRKY 19	CRKY 16	CRKY 17
27	CRKY 14	CRKY 15	CRKY 12	CRKY 13
28	BKGD A 16	BKGD A 17	BKGD A 14	BKGD A 15
29	BKGD A 12	BKGD A 13	BKGD A 10	BKGD A 11
30	GND	GND	GND	GND
31	GND	GND	GND	GND
32	GND	GND	GND	GND

(14)
KPC-1

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HLBK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK11 (13.5M)
10	GND	GND	GND	CK3 (27.0M)
11	MEFL 2 28	MEFL 2 29	MEFL 2 26	MEFL 2 27
12	MEFL 2 24	MEFL 2 25	MEFL 2 22	MEFL 2 23
13	MEFL 2 20	MEFL 2 21	MEFL 2 18	MEFL 2 19
14	MEFL 1 26	MEFL 1 27	MEFL 1 24	MEFL 1 25
15	MEFL 1 22	MEFL 1 23	MEFL 1 20	MEFL 1 21
16	KYSR 2 28	KYSR 2 29	KYSR 2 26	KYSR 2 27
17	KYSR 2 24	KYSR 2 25	KYSR 2 22	KYSR 2 23
18	KYSR 2 20	KYSR 2 21	KYSR 2 18	KYSR 2 19
19	KYSR 1 26	KYSR 1 27	KYSR 1 24	KYSR 1 25
20	KYSR 1 22	KYSR 1 23	KYSR 1 20	KYSR 1 21
21	MEBG A 28	MEBG A 29	MEBG A 26	MEBG A 27
22	MEBG A 24	MEBG A 25	MEBG A 22	MEBG A 23
23	MEBG B 28	MEBG B 29	MEBG B 26	MEBG B 27
24	MEBG B 24	MEBG B 25	MEBG B 22	MEBG B 23
25	MEBG B 20	MEBG B 21	MEBG B 18	MEBG B 19
26	CRKY 28	CRKY 29	CRKY 26	CRKY 27
27	CRKY 24	CRKY 25	CRKY 22	CRKY 23
28	BKGD A 26	BKGD A 27	BKGD A 24	BKGD A 25
29	BKGD A 22	BKGD A 23	BKGD A 20	BKGD A 21
30	GND	GND	GND	GND
31	GND	GND	GND	GND
32	GND	GND	GND	GND

(15)
MIX-4A

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HLBK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK11 (13.5M)
10	GND	GND	GND	CK3 (27.0M)
11	MEFL 2 28	MEFL 2 29	MEFL 2 26	MEFL 2 27
12	MEFL 2 24	MEFL 2 25	MEFL 2 22	MEFL 2 23
13	MEFL 2 20	MEFL 2 21	MEFL 2 18	MEFL 2 19
14	MEFL 1 26	MEFL 1 27	MEFL 1 24	MEFL 1 25
15	MEFL 1 22	MEFL 1 23	MEFL 1 20	MEFL 1 21
16				
17				
18				
19				
20				
21				
22	MEBG A 26	MEBG A 27	MEBG A 24	MEBG A 25
23	MEBG A 22	MEBG A 23	MEBG A 20	MEBG A 21
24	MEBG B 26	MEBG B 27	MEBG B 24	MEBG B 25
25	MEBG B 22	MEBG B 23	MEBG B 20	MEBG B 21
26	CRKY 28	CRKY 29	CRKY 26	CRKY 27
27	CRKY 24	CRKY 25	CRKY 22	CRKY 23
28	BKGD A 26	BKGD A 27	BKGD A 24	BKGD A 25
29	BKGD A 22	BKGD A 23	BKGD A 20	BKGD A 21
30	GND	GND	GND	GND
31	GND	GND	GND	GND
32	GND	GND	GND	GND

	A	B	C	D
1	BKGD B 16	BKGD B 17	BKGD B 14	BKGD B 15
2	FILL 2 18	FILL 2 19	FILL 2 16	FILL 2 17
3	FILL 2 14	FILL 2 15	FILL 2 12	FILL 2 13
4	FILL 2 10	FILL 2 11	FILL 2 18	FILL 2 19
5	FILL 1 16	FILL 1 17	FILL 1 14	FILL 1 15
6	FILL 1 12	FILL 1 13	FILL 1 10	FILL 1 11
7	WSLD 112	WSLD 113	WSLD 110	WSLD 111
8	WSLD 18	WSLD 19	WSLD 16	WSLD 17
9	WSLD 14	WSLD 15	WSLD 12	WSLD 13
10	WSLD 10	WSLD 11	WSLD 18	WSLD 19
11	WSLD 210	WSLD 211	WSLD 208	WSLD 209
12	WSLD 206	WSLD 207	WSLD 204	WSLD 205
13	WSLD 202	WSLD 203	WSLD 200	WSLD 201
14	WSLD 312	WSLD 313	WSLD 310	WSLD 311
15	WSLD 308	WSLD 309	WSLD 306	WSLD 307
16	WSLD 304	WSLD 305	WSLD 302	WSLD 303
17	WSLD 300	WSLD 301	WSLD 308	WSLD 309
18	WSLD 306	WSLD 307	WSLD 304	WSLD 305
19	WSLD 302	WSLD 303	WSLD 300	WSLD 301
20				
21				
22	MASK 18	MASK 19	MASK 16	MASK 17
23	MASK 14	MASK 15	MASK 12	MASK 13
24	MASK 10	MASK 11	MASK 18	MASK 19
25	ME 14	ME 15	ME 12	ME 13
26	BKDS 1 18	BKDS 1 19	BKDS 1 16	BKDS 1 17
27	BKDS 1 14	BKDS 1 15	BKDS 1 12	BKDS 1 13
28	BKDS 1 10	BKDS 1 11	BKDS 1 18	BKDS 1 19
29	NRKS 1 18	NRKS 1 19	NRKS 1 16	NRKS 1 17
30	NRKS 1 14	NRKS 1 15	NRKS 1 12	NRKS 1 13
31	GND	GND	GND	GND
32	GND	GND	GND	GND

	A	B	C	D
1				
2	PVW 18	PVW 19	PVW 16	PVW 17
3	PVW 14	PVW 15	PVW 12	PVW 13
4	PVW 10	PVW 11	PVW 18	PVW 19
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25	ME 14	ME 15	ME 12	ME 13
26	BKDS 1 18	BKDS 1 19	BKDS 1 16	BKDS 1 17
27	BKDS 1 14	BKDS 1 15	BKDS 1 12	BKDS 1 13
28	BKDS 1 10	BKDS 1 11	BKDS 1 18	BKDS 1 19
29	NRKS 1 18	NRKS 1 19	NRKS 1 16	NRKS 1 17
30	NRKS 1 14	NRKS 1 15	NRKS 1 12	NRKS 1 13
31	GND	GND	GND	GND
32	GND	GND	GND	GND

	A	B	C	D
1	BKGD B 26	BKGD B 27	BKGD B 24	BKGD B 25
2	FILL 2 28	FILL 2 29	FILL 2 26	FILL 2 27
3	FILL 2 24	FILL 2 25	FILL 2 22	FILL 2 23
4	FILL 2 20	FILL 2 21	FILL 2 18	FILL 2 19
5	FILL 1 26	FILL 1 27	FILL 1 24	FILL 1 25
6	FILL 1 22	FILL 1 23	FILL 1 20	FILL 1 21
7	WSLD 112	WSLD 113	WSLD 110	WSLD 111
8	WSLD 18	WSLD 19	WSLD 16	WSLD 17
9	WSLD 14	WSLD 15	WSLD 12	WSLD 13
10	WSLD 10	WSLD 11	WSLD 18	WSLD 19
11	WSLD 210	WSLD 211	WSLD 208	WSLD 209
12	WSLD 206	WSLD 207	WSLD 204	WSLD 205
13	WSLD 202	WSLD 203	WSLD 200	WSLD 201
14	WSLD 312	WSLD 313	WSLD 310	WSLD 311
15	WSLD 308	WSLD 309	WSLD 306	WSLD 307
16	WSLD 304	WSLD 305	WSLD 302	WSLD 303
17	WSLD 300	WSLD 301	WSLD 308	WSLD 309
18	WSLD 306	WSLD 307	WSLD 304	WSLD 305
19	WSLD 302	WSLD 303	WSLD 300	WSLD 301
20				
21				
22	MASK 28	MASK 29	MASK 26	MASK 27
23	MASK 24	MASK 25	MASK 22	MASK 23
24	MASK 20	MASK 21	MASK 28	MASK 29
25	ME 24	ME 25	ME 22	ME 23
26	BKDS 1 28	BKDS 1 29	BKDS 1 26	BKDS 1 27
27	BKDS 1 24	BKDS 1 25	BKDS 1 22	BKDS 1 23
28	BKDS 1 20	BKDS 1 21	BKDS 1 18	BKDS 1 19
29	NRKS 1 28	NRKS 1 29	NRKS 1 26	NRKS 1 27
30	NRKS 1 24	NRKS 1 25	NRKS 1 22	NRKS 1 23
31	GND	GND	GND	GND
32	GND	GND	GND	GND

	A	B	C	D
1				
2	PVW 28	PVW 29	PVW 26	PVW 27
3	PVW 24	PVW 25	PVW 22	PVW 23
4	PVW 20	PVW 21	PVW 28	PVW 29
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25	ME 24	ME 25	ME 22	ME 23
26	BKDS 1 28	BKDS 1 29	BKDS 1 26	BKDS 1 27
27	BKDS 1 24	BKDS 1 25	BKDS 1 22	BKDS 1 23
28	BKDS 1 20	BKDS 1 21	BKDS 1 18	BKDS 1 19
29	NRKS 1 28	NRKS 1 29	NRKS 1 26	NRKS 1 27
30	NRKS 1 24	NRKS 1 25	NRKS 1 22	NRKS 1 23
31	GND	GND	GND	GND
32	GND	GND	GND	GND

	A	B	C
1	GND	GND	GND
2	BDKS 2 15	BDKS 2 16	BDKS 2 17
3	BDKS 2 12	BDKS 2 13	BDKS 2 14
4	NRKS 2 111	BDKS 2 10	BDKS 2 110
5	NRKS 2 18	NRKS 2 19	NRKS 2 110
6	NRKS 2 15	NRKS 2 16	NRKS 2 17
7	NRKS 2 12	NRKS 2 13	NRKS 2 14
8	NTRS 111	NRKS 2 10	NRKS 2 11
9	NTRS 18	NTRS 19	NTRS 110
10	NTRS 15	NTRS 16	NTRS 17
11	NTRS 12	NTRS 13	NTRS 14
12	OTRS 111	NTRS 10	NTRS 11
13	OTRS 18	OTRS 19	OTRS 110
14	OTRS 15	OTRS 16	OTRS 17
15	OTRS 12	OTRS 13	OTRS 14
16		OTRS 10	OTRS 11
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29	GND	GND	GND
30	GND	GND	GND
31	GND	GND	GND
32	GND	GND	GND

MB-393 MOTHER BOARD
(16)
MIX-6A

(17)
OUT-2

(18)
CRK-4

(19)
CRK-4

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK12 (13.5M)
10	GND	GND	GND	CK4 (27.0M)
11				
12				
13				
14				
15				
16	KYSR D8	KYSR D9		
17	KYSR D4	KYSR D5	KYSR D6	KYSR D7
18	KYSR D0	KYSR D1	KYSR D2	KYSR D3
19				
20				
21				
22				
23				
24				
25				
26	BKGD A D8	BKGD A D9	BKGD A D6	BKGD A D7
27	BKGD A D4	BKGD A D5	BKGD A D2	BKGD A D3
28	BKGD A D0	BKGD A D1	BKGD A D8	BKGD A D9
29	BKGD B D6	BKGD B D7	BKGD B D4	BKGD B D5
30	BKGD B D2	BKGD B D3	BKGD B D0	BKGD B D1
31	GND	GND	BKGD B D0	BKGD B D1
32	GND	GND		

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK12 (13.5M)
10	GND	GND	GND	CK4 (27.0M)
11	AUX1 8	AUX1 9	AUX1 6	AUX1 7
12	AUX1 4	AUX1 5	AUX1 2	AUX1 3
13	AUX1 0	AUX1 1	AUX1 8	AUX1 9
14	AUX4 6	AUX4 7	AUX4 4	AUX4 5
15	AUX4 2	AUX4 3	AUX4 0	AUX4 1
16	PVW 8	PVW 9	PVW 6	PVW 7
17	PVW 4	PVW 5	PVW 2	PVW 3
18	PVW 0	PVW 1	PVW 8	PVW 9
19	AUX2 6	AUX2 7	AUX2 4	AUX2 5
20	AUX2 2	AUX2 3	AUX2 0	AUX2 1
21	AUX3 8	AUX3 9	AUX3 6	AUX3 7
22	AUX3 4	AUX3 5	AUX3 2	AUX3 3
23	AUX3 0	AUX3 1	AUX3 8	AUX3 9
24	PGM 16	PGM 17	PGM 14	PGM 15
25	PGM 12	PGM 13	PGM 10	PGM 11
26	PGM 8	PGM 9	PGM 6	PGM 7
27	PGM 4	PGM 5	PGM 2	PGM 3
28	PGM 0	PGM 1	PGM 8	PGM 9
29	PVW 12	PVW 13	PVW 10	PVW 11
30	GND	GND	PVW 10	PVW 11
31	GND	GND		
32	GND	GND		

X

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK13 (13.5M)
10	GND	GND	GND	CK5 (27.0M)
11	KYSR 2 18	KYSR 2 19	KYSR 2 16	KYSR 2 17
12	KYSR 2 14	KYSR 2 15	KYSR 2 12	KYSR 2 13
13	KYSR 2 10	KYSR 2 11	KYSR 2 8	KYSR 2 9
14	KYSR 1 16	KYSR 1 17	KYSR 1 14	KYSR 1 15
15	KYSR 1 12	KYSR 1 13	KYSR 1 10	KYSR 1 11
16				
17				
18				
19				
20				
21				
22				
23				
24	BKGD Y8	BKGD Y9	BKGD Y10	BKGD Y11
25	BKGD Y4	BKGD Y5	BKGD Y6	BKGD Y7
26	BKGD Y0	BKGD Y1	BKGD Y2	BKGD Y3
27	BKGD 18	BKGD 19	BKGD 16	BKGD 17
28	BKGD 14	BKGD 15	BKGD 12	BKGD 13
29	BKGD 10	BKGD 11	BKGD 8	BKGD 9
30	BKGD Q8	BKGD Q9	BKGD Q10	BKGD Q11
31	GND	GND	BKGD Q6	BKGD Q7
32	GND	GND	BKGD Q4	BKGD Q5

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK13 (13.5M)
10	GND	GND	GND	CK5 (27.0M)
11				
12				
13				
14				
15				
16				
17				
18				
19	KYSR 2 26	KYSR 2 27	KYSR 2 24	KYSR 2 25
20	KYSR 2 22	KYSR 2 23	KYSR 2 20	KYSR 2 21
21	KYSR 1 28	KYSR 1 29	KYSR 1 26	KYSR 1 27
22	KYSR 1 24	KYSR 1 25	KYSR 1 22	KYSR 1 23
23	KYSR 1 20	KYSR 1 21	KYSR 1 18	KYSR 1 19
24	BKGD Y8	BKGD Y9	BKGD Y10	BKGD Y11
25	BKGD Y4	BKGD Y5	BKGD Y6	BKGD Y7
26	BKGD Y0	BKGD Y1	BKGD Y2	BKGD Y3
27	BKGD 18	BKGD 19	BKGD 16	BKGD 17
28	BKGD 14	BKGD 15	BKGD 12	BKGD 13
29	BKGD 10	BKGD 11	BKGD 8	BKGD 9
30	BKGD Q8	BKGD Q9	BKGD Q10	BKGD Q11
31	GND	GND	BKGD Q6	BKGD Q7
32	GND	GND	BKGD Q4	BKGD Q5

	A	B	C	D
1	FILL D6	FILL D7	FILL D8	FILL D9
2	FILL D2	FILL D3	FILL D4	FILL D5
3	PVW P8	PVW P9	PVW P6	PVW P7
4	PVW P4	PVW P5	PVW P2	PVW P3
5	PVW P0	PVW P1	PVW P8	PVW P9
6	PGM P6	PGM P7	PGM P4	PGM P5
7	PGM P2	PGM P3	PGM P0	PGM P1
8	WSLD 112	WSLD 113	WSLD 110	WSLD 111
9	WSLD 18	WSLD 19	WSLD 16	WSLD 17
10	WSLD 14	WSLD 15	WSLD 12	WSLD 13
11	WSLD 10	WSLD 11	WSLD 8	WSLD 9
12	WSLD 26	WSLD 27	WSLD 24	WSLD 25
13	WSLD 22	WSLD 23	WSLD 20	WSLD 21
14	WSLD 312	WSLD 313	WSLD 310	WSLD 311
15	WSLD 38	WSLD 39	WSLD 36	WSLD 37
16	WSLD 34	WSLD 35	WSLD 32	WSLD 33
17	WSLD 30	WSLD 31	WSLD 28	WSLD 29
18	CLFD 6	CLFD 7	CLFD 4	CLFD 5
19	CLFD 2	CLFD 3	CLFD 0	CLFD 1
20				
21				
22	MASK 38	MASK 39	MASK 36	MASK 37
23	MASK 34	MASK 35	MASK 32	MASK 33
24	MASK 30	MASK 31		
25				
26				
27				
28				
29				
30				
31	GND	GND		
32	GND	GND		

	A	B	C	D
1	PVW 26	PVW 27	PVW 24	PVW 25
2	PVW 22	PVW 23	PVW 20	PVW 21
3	PVW P8	PVW P9	PVW P6	PVW P7
4	PVW P4	PVW P5	PVW P2	PVW P3
5	PVW P0	PVW P1	PVW P8	PVW P9
6	PGM P6	PGM P7	PGM P4	PGM P5
7	PGM P2	PGM P3	PGM P0	PGM P1
8	CLFD 8	CLFD 9	CLFD 6	CLFD 7
9	CLFD 4	CLFD 5	CLFD 2	CLFD 3
10	CLFD 0	CLFD 1		
11				
12				
13	CRKV 28	CRKV 29	CRKV 26	CRKV 27
14	CRKV 24	CRKV 25	CRKV 22	CRKV 23
15	CRKV 20	CRKV 21	CRKV 18	CRKV 19
16	CRKV 16	CRKV 17	CRKV 14	CRKV 15
17	CRKV 12	CRKV 13	CRKV 10	CRKV 11
18	BB 8	BB 9		
19	BB 4	BB 5		
20	BB 0	BB 1		
21	BB 2	BB 3		
22	BB 6	BB 7		
23	PVW OUT 8	PVW OUT 9		
24	PVW OUT 4	PVW OUT 5		
25	PVW OUT 0	PVW OUT 1		
26				
27				
28				
29				
30				
31	GND	GND		
32	GND	GND		

Y

	A	B	C	D
1	BKGD Q0	BKGD Q1	BKGD Q2	BKGD Q3
2	FRGD Y8	FRGD Y9	FRGD Y10	FRGD Y11
3	FRGD Y4	FRGD Y5	FRGD Y6	FRGD Y7
4	FRGD Y0	FRGD Y1	FRGD Y2	FRGD Y3
5	FRGD V8	FRGD V9	FRGD V10	FRGD V11
6	FRGD V4	FRGD V5	FRGD V6	FRGD V7
7	FRGD V0	FRGD V1	FRGD V2	FRGD V3
8	FRGD U8	FRGD U9	FRGD U10	FRGD U11
9	FRGD U4	FRGD U5	FRGD U6	FRGD U7
10	FRGD U0	FRGD U1	FRGD U2	FRGD U3
11	CRK 6	CRK 7	CRK 4	CRK 5
12	CRK 2	CRK 3	CRK 0	CRK 1
13	CRKV 18	CRKV 19	CRKV 16	CRKV 17
14	CRKV 14	CRKV 15	CRKV 12	CRKV 13
15	CRKV 10	CRKV 11	CRKV 8	CRKV 9
16	CRKY 16	CRKY 17	CRKY 14	CRKY 15
17	CRKY 12	CRKY 13	CRKY 10	CRKY 11
18	CKFL 18	CKFL 19	CKFL 16	CKFL 17
19	CKFL 14	CKFL 15	CKFL 12	CKFL 13
20	CKFL 10	CKFL 11	CKFL 8	CKFL 9
21	CKMSK 16	CKMSK 17	CKMSK 14	CKMSK 15
22	CKMSK 12	CKMSK 13	CKMSK 10	CKMSK 11
23				
24				
25				
26				
27				
28				
29				
30	GND	GND		
31	GND	GND		
32	GND	GND		

	A	B	C	D
1	BKGD Q0	BKGD Q1	BKGD Q2	BKGD Q3
2	FRGD Y8	FRGD Y9	FRGD Y10	FRGD Y11
3	FRGD Y4	FRGD Y5	FRGD Y6	FRGD Y7
4	FRGD Y0	FRGD Y1	FRGD Y2	FRGD Y3
5	FRGD V8	FRGD V9	FRGD V10	FRGD V11
6	FRGD V4	FRGD V5	FRGD V6	FRGD V7
7	FRGD V0	FRGD V1	FRGD V2	FRGD V3
8	FRGD U8	FRGD U9	FRGD U10	FRGD U11
9	FRGD U4	FRGD U5	FRGD U6	FRGD U7
10	FRGD U0	FRGD U1	FRGD U2	FRGD U3
11	CRK 6	CRK 7	CRK 4	CRK 5
12	CRK 2	CRK 3	CRK 0	CRK 1
13	CRKV 18	CRKV 19	CRKV 16	CRKV 17
14	CRKV 14	CRKV 15	CRKV 12	CRKV 13
15	CRKV 10	CRKV 11	CRKV 8	CRKV 9
16	CRKY 16	CRKY 17	CRKY 14	CRKY 15
17	CRKY 12	CRKY 13	CRKY 10	CRKY 11
18	CKFL 18	CKFL 19	CKFL 16	CKFL 17
19	CKFL 14	CKFL 15	CKFL 12	CKFL 13
20	CKFL 10	CKFL 11	CKFL 8	CKFL 9
21	CKMSK 16	CKMSK 17	CKMSK 14	CKMSK 15
22	CKMSK 12	CKMSK 13	CKMSK 10	CKMSK 11
23				
24				
25				
26				
27				
28				
29				
30	GND	GND		
31	GND	GND		
32	GND	GND		

	A	B	C
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
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25			
26			
27			
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29			
30			
31			
32			

	A	B	C
1	GND	GND	GND
2	GND	ED PVW	GND
3	GND	GND	GND
4	GND	AUX 4	GND
5	GND	GND	GND
6	GND	AUX 2	G

MB-393 MOTHER BOARD

(1A)

MAT-2

(1B)

MY-50

(1C)

XPT-2

(1D)

XPT-2

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK14 (13.5M)
10	GND	GND	GND	CK6 (27.0M)
11	AUX1 6	AUX1 7	AUX1 8	AUX1 9
12	AUX1 2	AUX1 3	AUX1 4	AUX1 5
13	AUX4 8	AUX4 9	AUX1 0	AUX1 1
14	AUX4 4	AUX4 5	AUX4 6	AUX4 7
15	AUX4 0	AUX4 1	AUX4 2	AUX4 3
16	PVW 6	PVW 7	PVW 8	PVW 9
17	PVW 2	PVW 3	PVW 4	PVW 5
18	AUX2 8	AUX2 9	PVW 0	PVW 1
19	AUX2 4	AUX2 5	AUX2 6	AUX2 7
20	AUX2 0	AUX2 1	AUX2 2	AUX2 3
21	AUX3 6	AUX3 7	AUX3 8	AUX3 9
22	AUX3 2	AUX3 3	AUX3 4	AUX3 5
23	PGM 18	PGM 19	AUX3 0	AUX3 1
24	PGM 14	PGM 15	PGM 16	PGM 17
25	PGM 10	PGM 11	PGM 12	PGM 13
26	PGM 26	PGM 27	PGM 28	PGM 29
27	PGM 22	PGM 23	PGM 24	PGM 25
28	BKGD A D8	BKGD A D9	PGM 20	PGM 21
29	BKGD A D4	BKGD A D5	BKGD A D6	BKGD A D7
30	BKGD A D0	BKGD A D1	BKGD A D2	BKGD A D3
31	GND	GND	BKGD B D8	BKGD B D9
32	GND	GND	BKGD B D6	BKGD B D7

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK14 (13.5M)
10	GND	GND	GND	CK6 (27.0M)
11	AUX1 6	AUX1 7	AUX1 8	AUX1 9
12	AUX1 2	AUX1 3	AUX1 4	AUX1 5
13	AUX4 8	AUX4 9	AUX1 0	AUX1 1
14	AUX4 4	AUX4 5	AUX4 6	AUX4 7
15	AUX4 0	AUX4 1	AUX4 2	AUX4 3
16	PVW 6	PVW 7	PVW 8	PVW 9
17	PVW 2	PVW 3	PVW 4	PVW 5
18	AUX2 8	AUX2 9	PVW 0	PVW 1
19	AUX2 4	AUX2 5	AUX2 6	AUX2 7
20	AUX2 0	AUX2 1	AUX2 2	AUX2 3
21	AUX3 6	AUX3 7	AUX3 8	AUX3 9
22	AUX3 2	AUX3 3	AUX3 4	AUX3 5
23	PGM 18	PGM 19	AUX3 0	AUX3 1
24	PGM 14	PGM 15	PGM 16	PGM 17
25	PGM 10	PGM 11	PGM 12	PGM 13
26	PGM 26	PGM 27	PGM 28	PGM 29
27	PGM 22	PGM 23	PGM 24	PGM 25
28	BKGD A D8	BKGD A D9	PGM 20	PGM 21
29	BKGD A D4	BKGD A D5	BKGD A D6	BKGD A D7
30	BKGD A D0	BKGD A D1	BKGD A D2	BKGD A D3
31	GND	GND	BKGD B D8	BKGD B D9
32	GND	GND	BKGD B D6	BKGD B D7

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK15 (13.5M)
10	GND	GND	GND	CK7 (27.0M)
11	AUX1 6	AUX1 7	AUX1 8	AUX1 9
12	AUX1 2	AUX1 3	AUX1 4	AUX1 5
13	AUX4 8	AUX4 9	AUX1 0	AUX1 1
14	AUX4 4	AUX4 5	AUX4 6	AUX4 7
15	AUX4 0	AUX4 1	AUX4 2	AUX4 3
16	PVW 6	PVW 7	PVW 8	PVW 9
17	PVW 2	PVW 3	PVW 4	PVW 5
18	AUX2 8	AUX2 9	PVW 0	PVW 1
19	AUX2 4	AUX2 5	AUX2 6	AUX2 7
20	AUX2 0	AUX2 1	AUX2 2	AUX2 3
21	AUX3 6	AUX3 7	AUX3 8	AUX3 9
22	AUX3 2	AUX3 3	AUX3 4	AUX3 5
23	BKGD A D8	BKGD A D9	AUX3 0	AUX3 1
24	BKGD A D4	BKGD A D5	BKGD A D6	BKGD A D7
25	BKGD A D0	BKGD A D1	BKGD A D2	BKGD A D3
26	BKGD B D6	BKGD B D7	BKGD B D8	BKGD B D9
27	BKGD B D2	BKGD B D3	BKGD B D4	BKGD B D5
28	FILL D8	FILL D9	BKGD B D0	BKGD B D1
29	FILL D4	FILL D5	FILL D6	FILL D7
30	FILL D0	FILL D1	FILL D2	FILL D3
31	GND	GND	KYSR 2 18	KYSR 2 19
32	GND	GND	KYSR 2 16	KYSR 2 17

	A	B	C	D
1	+5V	RDATA : L	RDATA : H	-5V
2	+5V	WDATA : L	WDATA : H	-5V
3	+5V	ADD : L	ADD : H	FUSE -
4	+5V	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK15 (13.5M)
10	GND	GND	GND	CK7 (27.0M)
11	AUX1 6	AUX1 7	AUX1 8	AUX1 9
12	AUX1 2	AUX1 3	AUX1 4	AUX1 5
13	AUX4 8	AUX4 9	AUX1 0	AUX1 1
14	AUX4 4	AUX4 5	AUX4 6	AUX4 7
15	AUX4 0	AUX4 1	AUX4 2	AUX4 3
16	PVW 6	PVW 7	PVW 8	PVW 9
17	PVW 2	PVW 3	PVW 4	PVW 5
18	AUX2 8	AUX2 9	PVW 0	PVW 1
19	AUX2 4	AUX2 5	AUX2 6	AUX2 7
20	AUX2 0	AUX2 1	AUX2 2	AUX2 3
21	AUX3 6	AUX3 7	AUX3 8	AUX3 9
22	AUX3 2	AUX3 3	AUX3 4	AUX3 5
23	BKGD A D8	BKGD A D9	AUX3 0	AUX3 1
24	BKGD A D4	BKGD A D5	BKGD A D6	BKGD A D7
25	BKGD A D0	BKGD A D1	BKGD A D2	BKGD A D3
26	BKGD B D6	BKGD B D7	BKGD B D8	BKGD B D9
27	BKGD B D2	BKGD B D3	BKGD B D4	BKGD B D5
28	FILL D8	FILL D9	BKGD B D0	BKGD B D1
29	FILL D4	FILL D5	FILL D6	FILL D7
30	FILL D0	FILL D1	FILL D2	FILL D3
31	GND	GND	KYSR 2 18	KYSR 2 19
32	GND	GND	KYSR 2 16	KYSR 2 17

	A	B	C	D
1	BKGD B D2	BKGD B D3	BKGD B D4	BKGD B D5
2	FILL D8	FILL D9	BKGD B D0	BKGD B D1
3	FILL D4	FILL D5	FILL D6	FILL D7
4	FILL D0	FILL D1	FILL D2	FILL D3
5	KYSR 2 16	KYSR 2 17	KYSR 2 18	KYSR 2 19
6	KYSR 2 12	KYSR 2 13	KYSR 2 14	KYSR 2 15
7	KYSR 1 18	KYSR 1 19	KYSR 2 10	KYSR 2 11
8	KYSR 1 14	KYSR 1 15	KYSR 1 16	KYSR 1 17
9	KYSR 1 10	KYSR 1 11	KYSR 1 12	KYSR 1 13
10	KYSR D6	KYSR D7	KYSR D8	KYSR D9
11	KYSR D2	KYSR D3	KYSR D4	KYSR D5
12	KYSR 2 28	KYSR 2 29	KYSR D0	KYSR D1
13	KYSR 2 24	KYSR 2 25	KYSR 2 26	KYSR 2 27
14	KYSR 2 20	KYSR 2 21	KYSR 2 22	KYSR 2 23
15	KYSR 1 26	KYSR 1 27	KYSR 1 28	KYSR 1 29
16	KYSR 1 22	KYSR 1 23	KYSR 1 24	KYSR 1 25
17	BKGD A 28	BKGD A 29	KYSR 1 20	KYSR 1 21
18	BKGD A 24	BKGD A 25	BKGD A 26	BKGD A 27
19	BKGD A 20	BKGD A 21	BKGD A 22	BKGD A 23
20	BKGD B 26	BKGD B 27	BKGD B 28	BKGD B 29
21	BKGD B 22	BKGD B 23	BKGD B 24	BKGD B 25
22	FILL 2 28	FILL 2 29	BKGD B 20	BKGD B 21
23	FILL 2 24	FILL 2 25	FILL 2 26	FILL 2 27
24	FILL 2 20	FILL 2 21	FILL 2 22	FILL 2 23
25	FILL 1 26	FILL 1 27	FILL 1 28	FILL 1 29
26	FILL 1 22	FILL 1 23	FILL 1 24	FILL 1 25
27	BKGD A 18	BKGD A 19	FILL 1 20	FILL 1 21
28	BKGD A 14	BKGD A 15	BKGD A 16	BKGD A 17
29	BKGD A 10	BKGD A 11	BKGD A 12	BKGD A 13
30	BKGD B 16	BKGD B 17	BKGD B 18	BKGD B 19
31	GND	GND	BKGD B 14	BKGD B 15
32	GND	GND	BKGD B 12	BKGD B 13

	A	B	C	D
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13	PVW OUT 8	PVW OUT 9		
14	PVW OUT 6	PVW OUT 7		
15	PVW OUT 4	PVW OUT 5		
16	PVW OUT 2	PVW OUT 3		
17	PVW OUT 0	PVW OUT 1		
18	CKMSK 18	CKMSK 19		
19	CKMSK 14	CKMSK 15	CKMSK 16	CKMSK 17
20	CKMSK 10	CKMSK 11	CKMSK 12	CKMSK 13
21	CKMSK 26	CKMSK 27	CKMSK 28	CKMSK 29
22	CKMSK 22	CKMSK 23	CKMSK 24	CKMSK 25
23	WSLD 112	WSLD 113	CKMSK 20	CKMSK 21
24	WSLD 1 8	WSLD 1 9	WSLD 110	WSLD 111
25	WSLD 1 4	WSLD 1 5	WSLD 1 6	WSLD 1 7
26	WSLD 1 0	WSLD 1 1	WSLD 1 2	WSLD 1 3
27	WSLD 210	WSLD 211	WSLD 212	WSLD 213
28	WSLD 2 6	WSLD 2 7	WSLD 2 8	WSLD 2 9
29	WSLD 2 2	WSLD 2 3	WSLD 2 4	WSLD 2 5
30			WSLD 2 0	WSLD 2 1
31	GND	GND		
32	GND	GND		

	A	B	C	D
1	KYSR 2 12	KYSR 2 13	KYSR 2 14	KYSR 2 15
2	KYSR 1 18	KYSR 1 19	KYSR 2 10	KYSR 2 11
3	KYSR 1 14	KYSR 1 15	KYSR 1 16	KYSR 1 17
4	KYSR 1 10	KYSR 1 11	KYSR 1 12	KYSR 1 13
5	KYSR D6	KYSR D7	KYSR D8	KYSR D9
6	KYSR D2	KYSR D3	KYSR D4	KYSR D5
7	KYSR 2 28	KYSR 2 29	KYSR D0	KYSR D1
8	KYSR 2 24	KYSR 2 25	KYSR 2 26	KYSR 2 27
9	KYSR 2 20	KYSR 2 21	KYSR 2 22	KYSR 2 23
10	KYSR 1 26	KYSR 1 27	KYSR 1 28	KYSR 1 29
11	KYSR 1 22	KYSR 1 23	KYSR 1 24	KYSR 1 25
12	BKGD A 28	BKGD A 29	KYSR 1 20	KYSR 1 21
13	BKGD A 24	BKGD A 25	BKGD A 26	BKGD A 27
14	BKGD A 20	BKGD A 21	BKGD A 22	BKGD A 23
15	BKGD B 26	BKGD B 27	BKGD B 28	BKGD B 29
16	BKGD B 22	BKGD B 23	BKGD B 24	BKGD B 25
17	FILL 2 28	FILL 2 29	BKGD B 20	BKGD B 21
18	FILL 2 24	FILL 2 25	FILL 2 26	FILL 2 27
19	FILL 2 20	FILL 2 21	FILL 2 22	FILL 2 23
20	FILL 1 26	FILL 1 27	FILL 1 28	FILL 1 29
21	FILL 1 22	FILL 1 23	FILL 1 24	FILL 1 25
22	BKGD A 18	BKGD A 19	FILL 1 20	FILL 1 21
23	BKGD A 14	BKGD A 15	BKGD A 16	BKGD A 17
24	BKGD A 10	BKGD A 11	BKGD A 12	BKGD A 13
25	BKGD B 16	BKGD B 17	BKGD B 18	BKGD B 19
26	BKGD B 12	BKGD B 13	BKGD B 14	BKGD B 15
27	FILL 2 18	FILL 2 19	BKGD B 10	BKGD B 11
28	FILL 2 14	FILL 2 15	FILL 2 16	FILL 2 17
29	FILL 2 10	FILL 2 11	FILL 2 12	FILL 2 13
30	FILL 1 16	FILL 1 17	FILL 1 18	FILL 1 19
31	GND	GND	FILL 1 14	FILL 1 15
32	GND	GND	FILL 1 12	FILL 1 13

	A	B	C	D
1	KYSR 2 12	KYSR 2 13	KYSR 2 14	KYSR 2 15
2	KYSR 1 18	KYSR 1 19	KYSR 2 10	KYSR 2 11
3	KYSR 1 14	KYSR 1 15	KYSR 1 16	KYSR 1 17
4	KYSR 1 10	KYSR 1 11	KYSR 1 12	KYSR 1 13
5	KYSR D6	KYSR D7	KYSR D8	KYSR D9
6	KYSR D2	KYSR D3	KYSR D4	KYSR D5
7	KYSR 2 28	KYSR 2 29	KYSR D0	KYSR D1
8	KYSR 2 24	KYSR 2 25	KYSR 2 26	KYSR 2 27
9	KYSR 2 20	KYSR 2 21	KYSR 2 22	KYSR 2 23
10	KYSR 1 26	KYSR 1 27	KYSR 1 28	KYSR 1 29
11	KYSR 1 22	KYSR 1 23	KYSR 1 24	KYSR 1 25
12	BKGD A 28	BKGD A 29	KYSR 1 20	KYSR 1 21
13	BKGD A 24	BKGD A 25	BKGD A 26	BKGD A 27
14	BKGD A 20	BKGD A 21	BKGD A 22	BKGD A 23
15	BKGD B 26	BKGD B 27	BKGD B 28	BKGD B 29
16	BKGD B 22	BKGD B 23	BKGD B 24	BKGD B 25
17	FILL 2 28	FILL 2 29	BKGD B 20	BKGD B 21
18	FILL 2 24	FILL 2 25	FILL 2 26	FILL 2 27

MB-393 MOTHER BAORD

(1E)
XPT-2

	A	B	C	D
1	+SV	RDATA : L	RDATA : H	-SV
2	+SV	WDATA : L	WDATA : H	-SV
3	+SV	ADD : L	ADD : H	FUSE -
4	+SV	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK16 (13.5M)
10	GND	GND	GND	CK8 (27.0M)
11	AUX1 6	AUX1 7	AUX1 8	AUX1 9
12	AUX1 2	AUX1 3	AUX1 4	AUX1 5
13	AUX4 8	AUX4 9	AUX1 0	AUX1 1
14	AUX4 4	AUX4 5	AUX4 6	AUX4 7
15	AUX4 0	AUX4 1	AUX4 2	AUX4 3
16	PVW 6	PVW 7	PVW 8	PVW 9
17	PVW 2	PVW 3	PVW 4	PVW 5
18	AUX2 8	AUX2 9	PVW 0	PVW 1
19	AUX2 4	AUX2 5	AUX2 6	AUX2 7
20	AUX2 0	AUX2 1	AUX2 2	AUX2 3
21	AUX3 6	AUX3 7	AUX3 8	AUX3 9
22	AUX3 2	AUX3 3	AUX3 4	AUX3 5
23	BKGD A D8	BKGD A D9	AUX3 0	AUX3 1
24	BKGD A D4	BKGD A D5	BKGD A D6	BKGD A D7
25	BKGD A D0	BKGD A D1	BKGD A D2	BKGD A D3
26	BKGD B D6	BKGD B D7	BKGD B D8	BKGD B D9
27	BKGD B D2	BKGD B D3	BKGD B D4	BKGD B D5
28	FILL D8	FILL D9	BKGD B D0	BKGD B D1
29	FILL D4	FILL D5	FILL D6	FILL D7
30	FILL D0	FILL D1	FILL D2	FILL D3
31	GND	GND	KYSR 2 18	KYSR 2 19
32	GND	GND	KYSR 2 16	KYSR 2 17

	A	B	C	D
1	KYSR 2 12	KYSR 2 13	KYSR 2 14	KYSR 2 15
2	KYSR 1 18	KYSR 1 19	KYSR 2 10	KYSR 2 11
3	KYSR 1 14	KYSR 1 15	KYSR 1 16	KYSR 1 17
4	KYSR 1 10	KYSR 1 11	KYSR 1 12	KYSR 1 13
5	KYSR D6	KYSR D7	KYSR D8	KYSR D9
6	KYSR D2	KYSR D3	KYSR D4	KYSR D5
7	KYSR 2 28	KYSR 2 29	KYSR D0	KYSR D1
8	KYSR 2 24	KYSR 2 25	KYSR 2 26	KYSR 2 27
9	KYSR 2 20	KYSR 2 21	KYSR 2 22	KYSR 2 23
10	KYSR 1 26	KYSR 1 27	KYSR 1 28	KYSR 1 29
11	KYSR 1 22	KYSR 1 23	KYSR 1 24	KYSR 1 25
12	BKGD A 28	BKGD A 29	KYSR 1 20	KYSR 1 21
13	BKGD A 24	BKGD A 25	BKGD A 26	BKGD A 27
14	BKGD A 20	BKGD A 21	BKGD A 22	BKGD A 23
15	BKGD B 26	BKGD B 27	BKGD B 28	BKGD B 29
16	BKGD B 22	BKGD B 23	BKGD B 24	BKGD B 25
17	FILL 2 28	FILL 2 29	BKGD B 20	BKGD B 21
18	FILL 2 24	FILL 2 25	FILL 2 26	FILL 2 27
19	FILL 2 20	FILL 2 21	FILL 2 22	FILL 2 23
20	FILL 1 26	FILL 1 27	FILL 1 28	FILL 1 29
21	FILL 1 22	FILL 1 23	FILL 1 24	FILL 1 25
22	BKGD A 18	BKGD A 19	FILL 1 20	FILL 1 21
23	BKGD A 14	BKGD A 15	BKGD A 16	BKGD A 17
24	BKGD A 10	BKGD A 11	BKGD A 12	BKGD A 13
25	BKGD B 16	BKGD B 17	BKGD B 18	BKGD B 19
26	BKGD B 12	BKGD B 13	BKGD B 14	BKGD B 15
27	FILL 2 18	FILL 2 19	BKGD B 10	BKGD B 11
28	FILL 2 14	FILL 2 15	FILL 2 16	FILL 2 17
29	FILL 2 10	FILL 2 11	FILL 2 12	FILL 2 13
30	FILL 1 16	FILL 1 17	FILL 1 18	FILL 1 19
31	GND	GND	FILL 1 14	FILL 1 15
32	GND	GND	FILL 1 12	FILL 1 13

	A	B	C
1	GND	GND	GND
2	MASK 39	FILL 1 10	FILL 1 11
3	MASK 36	MASK 37	MASK 38
4	MASK 33	MASK 34	MASK 35
5	MASK 30	MASK 31	MASK 32
6	MASK 27	MASK 28	MASK 29
7	MASK 24	MASK 25	MASK 26
8	MASK 21	MASK 22	MASK 23
9	MASK 18	MASK 19	MASK 20
10	MASK 15	MASK 16	MASK 17
11	MASK 12	MASK 13	MASK 14
12	GND	MASK 10	MASK 11
13	GND	GND	GND
14	GND	GND	GND
15	GND	GND	GND
16	GND	GND	GND
17	GND	GND	GND
18	GND	INPUT 38	GND
19	GND	GND	GND
20	GND	INPUT 37	GND
21	GND	GND	GND
22	GND	INPUT 36	GND
23	GND	GND	GND
24	GND	INPUT 35	GND
25	GND	GND	GND
26	GND	INPUT 34	GND
27	GND	GND	GND
28	GND	INPUT 33	GND
29	GND	GND	GND
30	GND	INPUT 32	GND
31	GND	GND	GND
32	GND	INPUT 31	GND

17
PRI INPUT 3

(1F)
XPT-2

	A	B	C	D
1	+SV	RDATA : L	RDATA : H	-SV
2	+SV	WDATA : L	WDATA : H	-SV
3	+SV	ADD : L	ADD : H	FUSE -
4	+SV	CKD : L	CKD : H	CKX
5	FUSE +	RST	LALT	VD
6	THERMO	SC	HBLK	HZ
7	SLTAD 1	SLTAD 2	SLTAD 3	SLTAD 4
8	SLTAD 0	CF	VBLK	OE
9	GND	GND	GND	CK16 (13.5M)
10	GND	GND	GND	CK8 (27.0M)
11	AUX1 6	AUX1 7	AUX1 8	AUX1 9
12	AUX1 2	AUX1 3	AUX1 4	AUX1 5
13	AUX4 8	AUX4 9	AUX1 0	AUX1 1
14	AUX4 4	AUX4 5	AUX4 6	AUX4 7
15	AUX4 0	AUX4 1	AUX4 2	AUX4 3
16	PVW 6	PVW 7	PVW 8	PVW 9
17	PVW 2	PVW 3	PVW 4	PVW 5
18	AUX2 8	AUX2 9	PVW 0	PVW 1
19	AUX2 4	AUX2 5	AUX2 6	AUX2 7
20	AUX2 0	AUX2 1	AUX2 2	AUX2 3
21	AUX3 6	AUX3 7	AUX3 8	AUX3 9
22	AUX3 2	AUX3 3	AUX3 4	AUX3 5
23	BKGD A D8	BKGD A D9	AUX3 0	AUX3 1
24	BKGD A D4	BKGD A D5	BKGD A D6	BKGD A D7
25	BKGD A D0	BKGD A D1	BKGD A D2	BKGD A D3
26	BKGD B D6	BKGD B D7	BKGD B D8	BKGD B D9
27	BKGD B D2	BKGD B D3	BKGD B D4	BKGD B D5
28	FILL D8	FILL D9	BKGD B D0	BKGD B D1
29	FILL D4	FILL D5	FILL D6	FILL D7
30	FILL D0	FILL D1	FILL D2	FILL D3
31	GND	GND	KYSR 2 18	KYSR 2 19
32	GND	GND	KYSR 2 16	KYSR 2 17

	A	B	C	D
1	KYSR 2 12	KYSR 2 13	KYSR 2 14	KYSR 2 15
2	KYSR 1 18	KYSR 1 19	KYSR 2 10	KYSR 2 11
3	KYSR 1 14	KYSR 1 15	KYSR 1 16	KYSR 1 17
4	KYSR 1 10	KYSR 1 11	KYSR 1 12	KYSR 1 13
5	KYSR D6	KYSR D7	KYSR D8	KYSR D9
6	KYSR D2	KYSR D3	KYSR D4	KYSR D5
7	KYSR 2 28	KYSR 2 29	KYSR D0	KYSR D1
8	KYSR 2 24	KYSR 2 25	KYSR 2 26	KYSR 2 27
9	KYSR 2 20	KYSR 2 21	KYSR 2 22	KYSR 2 23
10	KYSR 1 26	KYSR 1 27	KYSR 1 28	KYSR 1 29
11	KYSR 1 22	KYSR 1 23	KYSR 1 24	KYSR 1 25
12	BKGD A 28	BKGD A 29	KYSR 1 20	KYSR 1 21
13	BKGD A 24	BKGD A 25	BKGD A 26	BKGD A 27
14	BKGD A 20	BKGD A 21	BKGD A 22	BKGD A 23
15	BKGD B 26	BKGD B 27	BKGD B 28	BKGD B 29
16	BKGD B 22	BKGD B 23	BKGD B 24	BKGD B 25
17	FILL 2 28	FILL 2 29	BKGD B 20	BKGD B 21
18	FILL 2 24	FILL 2 25	FILL 2 26	FILL 2 27
19	FILL 2 20	FILL 2 21	FILL 2 22	FILL 2 23
20	FILL 1 26	FILL 1 27	FILL 1 28	FILL 1 29
21	FILL 1 22	FILL 1 23	FILL 1 24	FILL 1 25
22	BKGD A 18	BKGD A 19	FILL 1 20	FILL 1 21
23	BKGD A 14	BKGD A 15	BKGD A 16	BKGD A 17
24	BKGD A 10	BKGD A 11	BKGD A 12	BKGD A 13
25	BKGD B 16	BKGD B 17	BKGD B 18	BKGD B 19
26	BKGD B 12	BKGD B 13	BKGD B 14	BKGD B 15
27	FILL 2 18	FILL 2 19	BKGD B 10	BKGD B 11
28	FILL 2 14	FILL 2 15	FILL 2 16	FILL 2 17
29	FILL 2 10	FILL 2 11	FILL 2 12	FILL 2 13
30	FILL 1 16	FILL 1 17	FILL 1 18	FILL 1 19
31	GND	GND	FILL 1 14	FILL 1 15
32	GND	GND	FILL 1 12	FILL 1 13

	A	B	C
1	GND	GND	GND
2	MASK 39	FILL 1 10	FILL 1 11
3	MASK 36	MASK 37	MASK 38
4	MASK 33	MASK 34	MASK 35
5	MASK 30	MASK 31	MASK 32
6	MASK 27	MASK 28	MASK 29
7	MASK 24	MASK 25	MASK 26
8	MASK 21	MASK 22	MASK 23
9	MASK 18	MASK 19	MASK 20
10	MASK 15	MASK 16	MASK 17
11	MASK 12	MASK 13	MASK 14
12	GND	MASK 10	MASK 11
13	GND	GND	GND
14	GND	GND	GND
15	GND	GND	GND
16	GND	GND	GND
17	GND	GND	GND
18	GND	INPUT 48	GND
19	GND	GND	GND
20	GND	INPUT 47	GND
21	GND	GND	GND
22	GND	INPUT 46	GND
23	GND	GND	GND
24	GND	INPUT 45	GND
25	GND	GND	GND
26	GND	INPUT 44	GND
27	GND	GND	GND
28	GND	INPUT 43	GND
29	GND	GND	GND
30	GND	INPUT 42	GND
31	GND	GND	GND
32	GND	INPUT 41	GND

18
PRI INPUT 4

MB-393 (5/5)
1-639-399-11
DVS-8000C

9-365

9-366

**B**

C

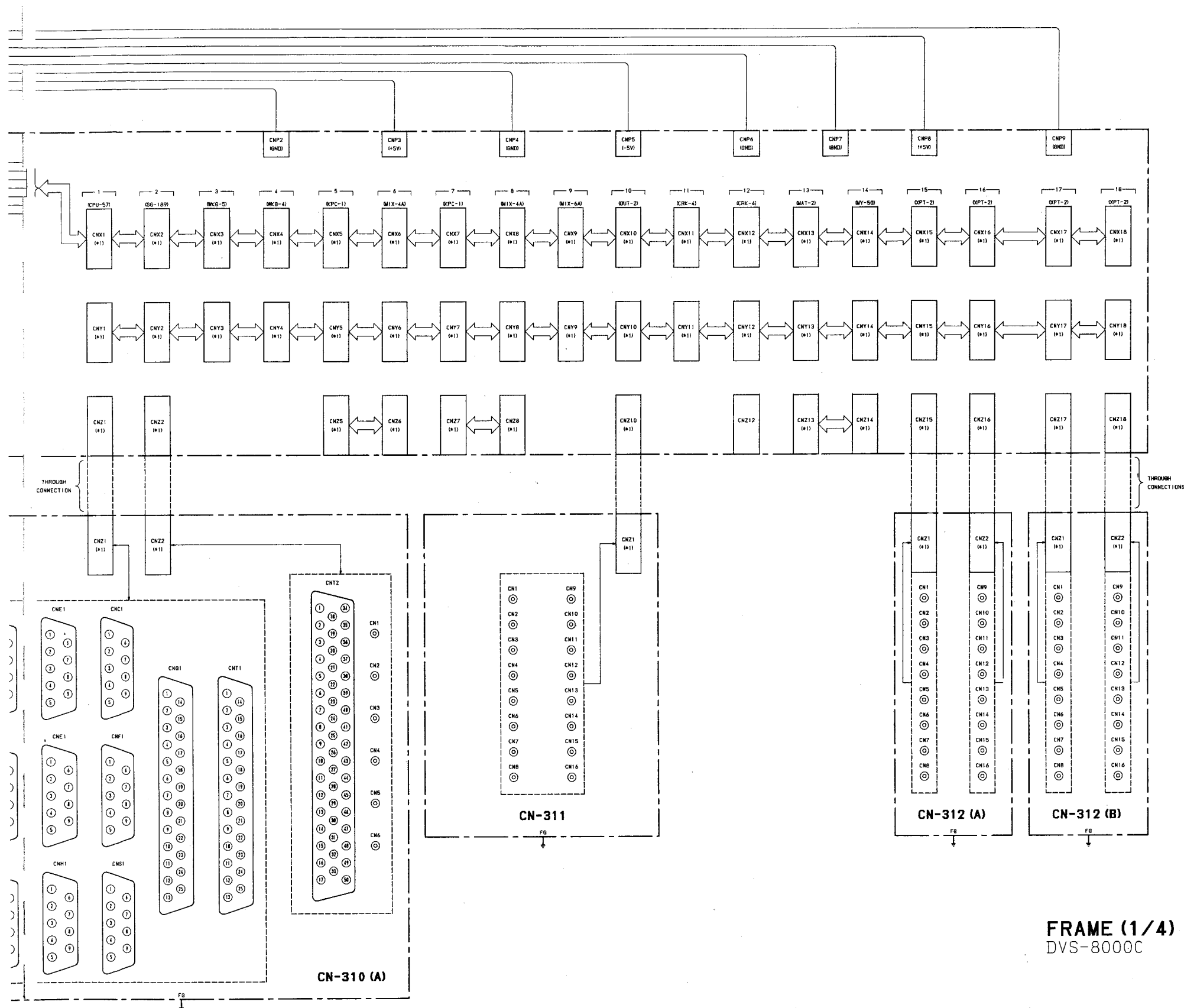
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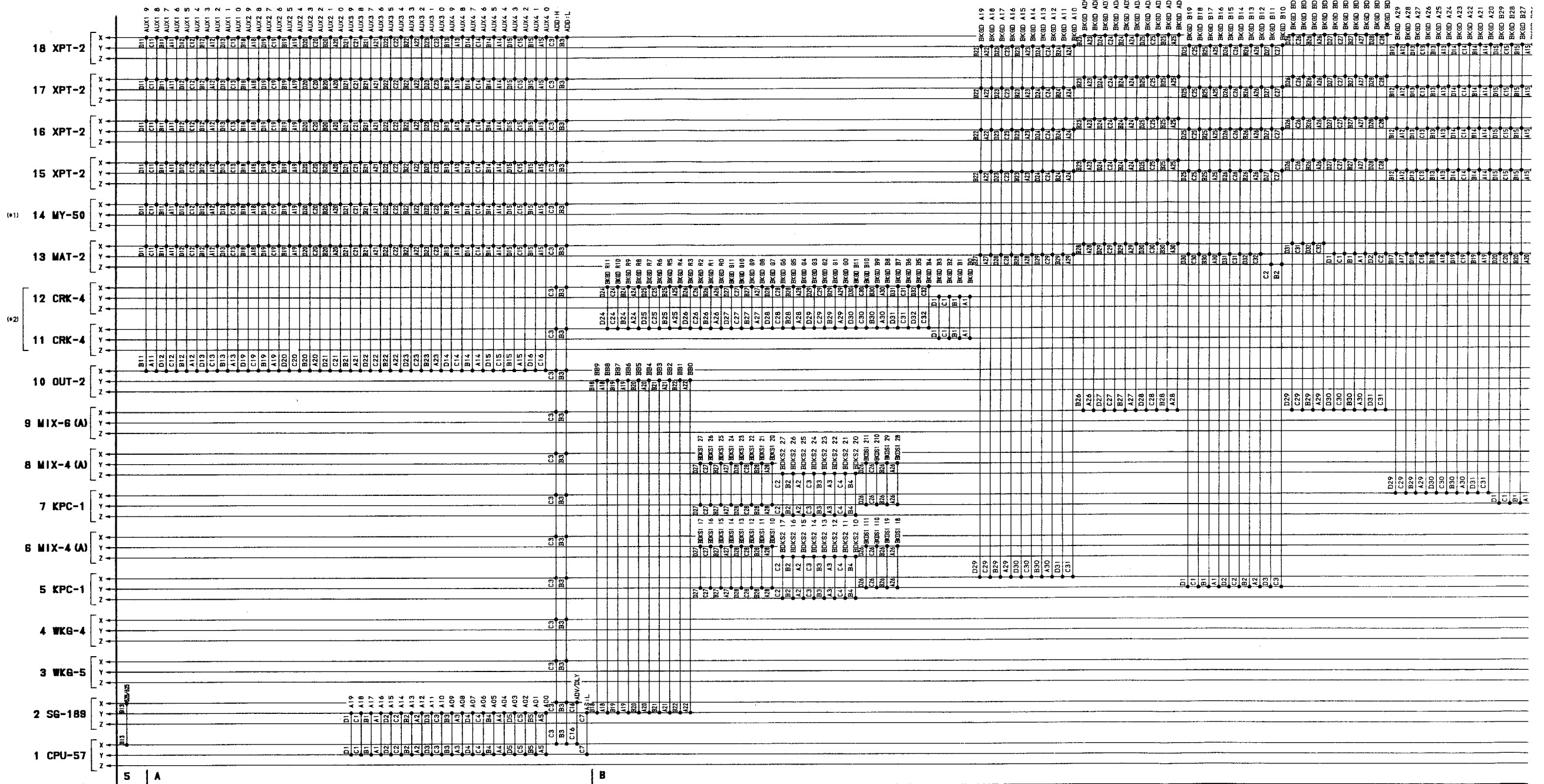
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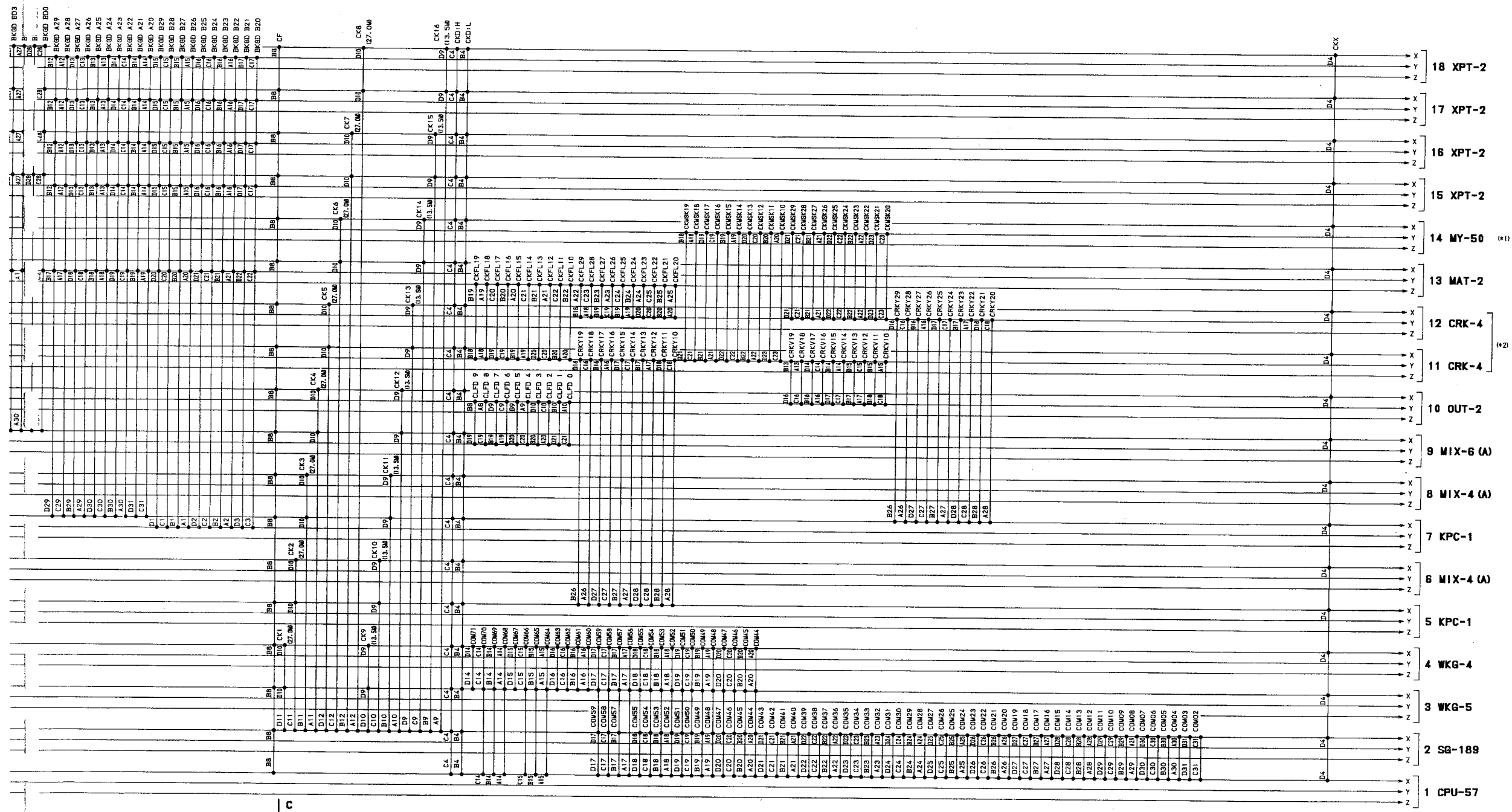
G

A

FRAME (1/4)
DVS-8000C



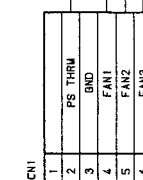
NOTE:
(*)BKDS-8041 (FRAME MEMORY BOARD)
(*)BKDS-8031 (CLEAN CHROMA KEY BOARD)

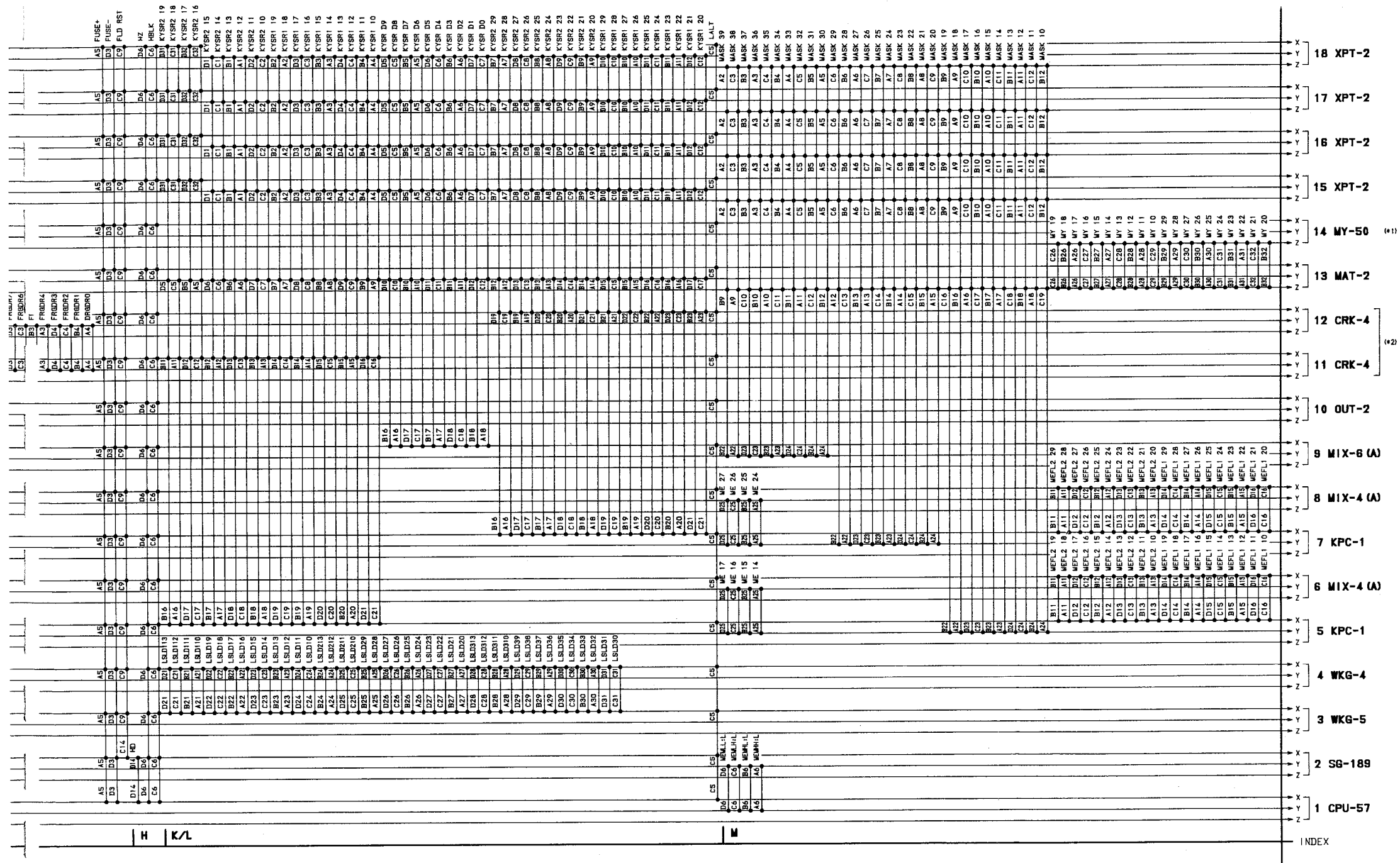


INDEX

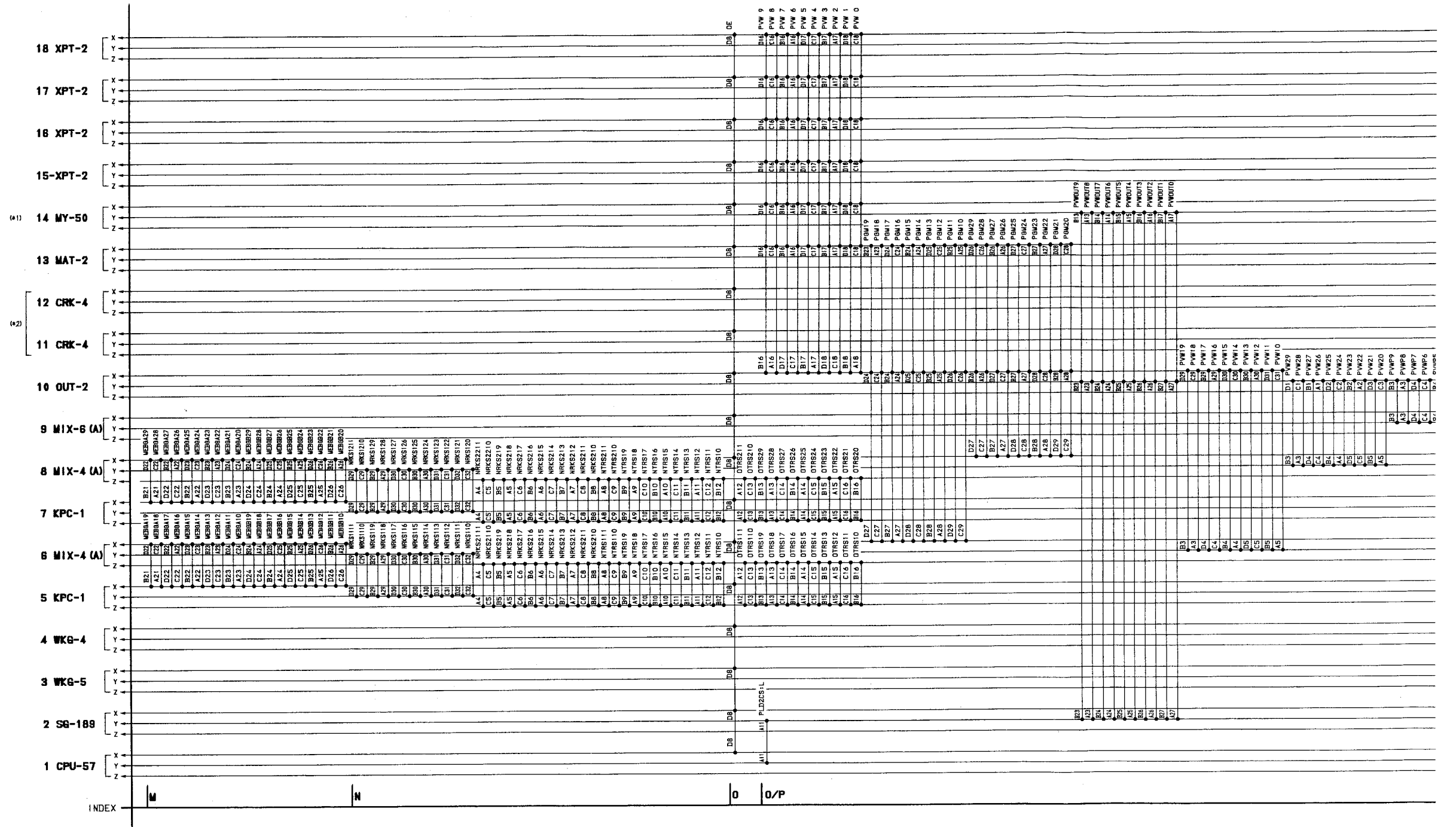
FRAME (2/4)
DVS-8000C

9-374





FRAME (3/4)
DVS-8000C



NOTE:
FOR GROUND LINES, REFER TO SCHEMATIC.
(*) BKDS-8041 (FRAME MEMORY BOARD)
(*) BKDS-8031 (CLEAN CHROMA KEY BOARD)



SECTION 10

PRINTED CIRCUIT BOARDS

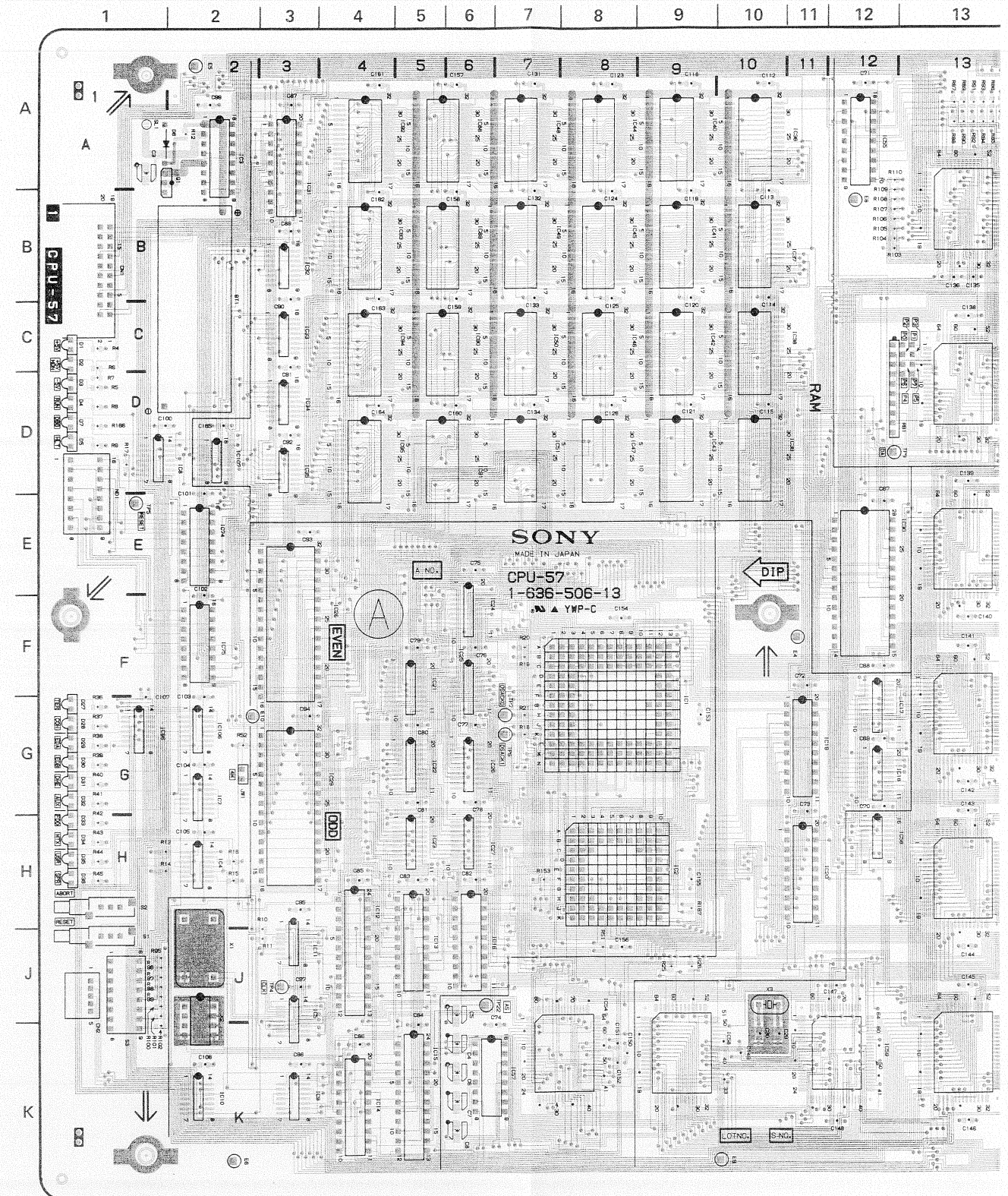
DVS-8000C

CPU-57 (1-636-506-13)

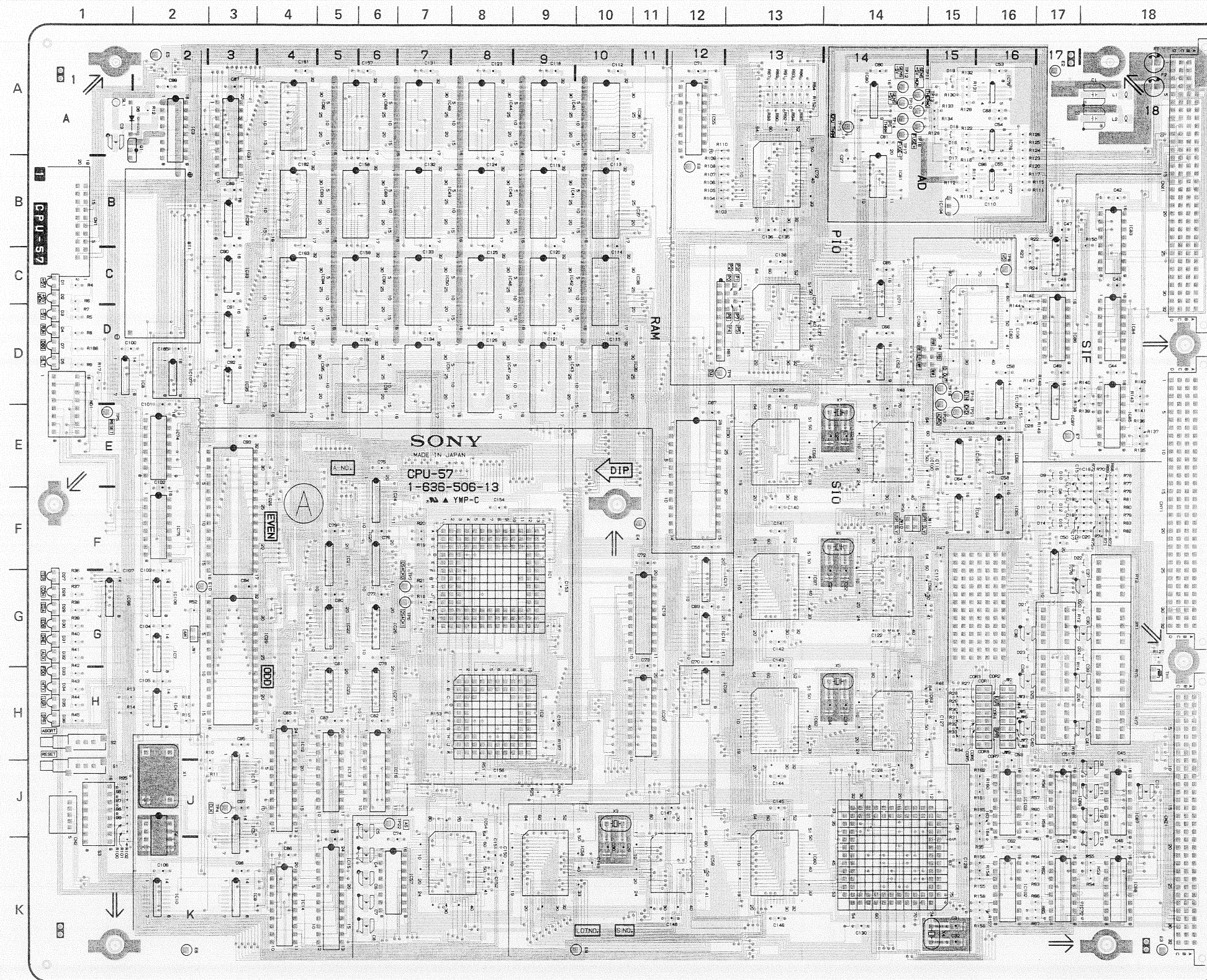
BT1	C-2	F1	A-18	IC65	F-16	RY5	H-18
		F2	A-18	IC66	E-16	RY6	H-17
CNX1	B-18			IC67	J-18	RY7	H-18
CNY1	F-18	IC1	G-9	IC68	K-18		
		IC2	H-9	IC69	J-18	S1	J-1
CNZ1	J-18	IC3	A-2	IC70	K-18	S2	H-1
		IC4	H-2	IC71	C-14	S3	K-1
		IC5	J-3	IC72	B-13		
CN1	B-1	IC7	G-2	IC73	C-13	TH1	H-18
CN2	K-1	IC8	D-1	IC74	E-2		
		IC9	K-3	IC75	F-2	TP4	J-3
COR1	H-16	IC10	K-2	IC76	G-17	TP5	E-1
COR2	H-16	IC11	J-3	IC77	B-16	TP6	G-7
COR3	H-16	IC12	H-4	IC78	A-16	TP7	G-7
COR4	H-16	IC13	J-5	IC79	A-16	TP8	C-16
COR5	H-15	IC14	K-4	IC80	A-14	TP9	D-13
COR6	H-15	IC15	K-5	IC81	B-14	TP10	A-14
COR7	H-16	IC16	J-6	IC82	D-16	TP11	A-14
COR8	H-16	IC17	G-13	IC83	B-18	TP12	A-14
		IC18	G-12	IC84	D-18	TP13	A-15
		IC19	G-11	IC85	E-18	TP14	A-14
D1	C-1	IC20	H-11	IC86	D-16	TP15	A-14
D2	C-1	IC21	F-5	IC87	E-17	TP16	A-14
D3	D-1	IC22	G-5	IC88	A-6	TP17	A-14
D4	D-1	IC23	H-5	IC89	B-6	TP18	D-15
D5	D-1	IC24	F-6	IC90	C-6	TP19	D-15
D6	A-2	IC25	F-6	IC91	D-6	TP20	E-15
D7	D-1	IC26	G-6	IC92	A-5	TP21	E-15
D8	F-17	IC27	H-6	IC93	B-5		
D9	E-17	IC28	F-4	IC94	C-5	X1	J-1
D10	E-17	IC29	G-4	IC95	D-5	X2	J-2
D11	F-17	IC30	E-13	IC96	G-1	X3	J-10
D12	F-17	IC31	A-3	IC97	G-13	X4	K-15
D13	F-17	IC32	B-3	IC98	G-15	X5	H-14
D14	F-17	IC33	C-3	IC99	E-13	X6	F-14
D15	F-17	IC34	D-3	IC100	E-15	X7	D-14
D16	A-15	IC35	D-3	IC101	E-16		
D17	B-15	IC36	A-11	IC102	K-16		
D18	A-15	IC37	B-11	IC103	J-16		
D19	A-15	IC38	C-11	IC104	B-15		
D20	G-18	IC39	D-11	IC105	D-16		
D21	G-16	IC40	A-9	IC106	G-2		
D22	F-18	IC41	B-9	IC107	D-2		
D23	G-16	IC42	C-9				
D24	G-18	IC43	D-9	JW2	H-2		
D25	H-16	IC44	A-8	JW3	H-16		
D26	H-18	IC45	B-8	JW4	H-16		
D27	G-1	IC46	C-8	JW5	H-16		
D28	G-1	IC47	D-8	JW6	H-16		
D29	G-1	IC48	A-7	JW7	H-16		
D30	G-1	IC49	B-7	JW8	H-16		
D31	G-1	IC50	C-7	JW9	H-16		
D32	G-1	IC51	D-7				
D33	H-1	IC52	D-14	L1	A-18		
D34	H-1	IC53	B-17	L2	A-18		
D35	H-1	IC54	J-8				
D36	H-1	IC55	A-12	ND1	D-1		
		IC56	H-13				
E2	A-17	IC57	K-7	Q1	A-2		
E3	K-18	IC58	K-10				
E4	F-11	IC59	K-12	RB1	D-13		
E5	A-2	IC60	K-13				
E6	K-2	IC61	J-15	RY1	G-18		
E7	E-17	IC62	H-13	RY2	G-18		
E8	B-12	IC63	H-15	RY3	G-18		
E9	K-10	IC64	F-16	RY4	G-18		
E10	G-3						

NOTE
 ** : **A SIDE
 ** (B) : **B SIDE

CPU-57; CPU BOARD



CPU-57; CPU BOARD



CPU-57 -A SIDE-
1-636-506-13
DVS-8000C

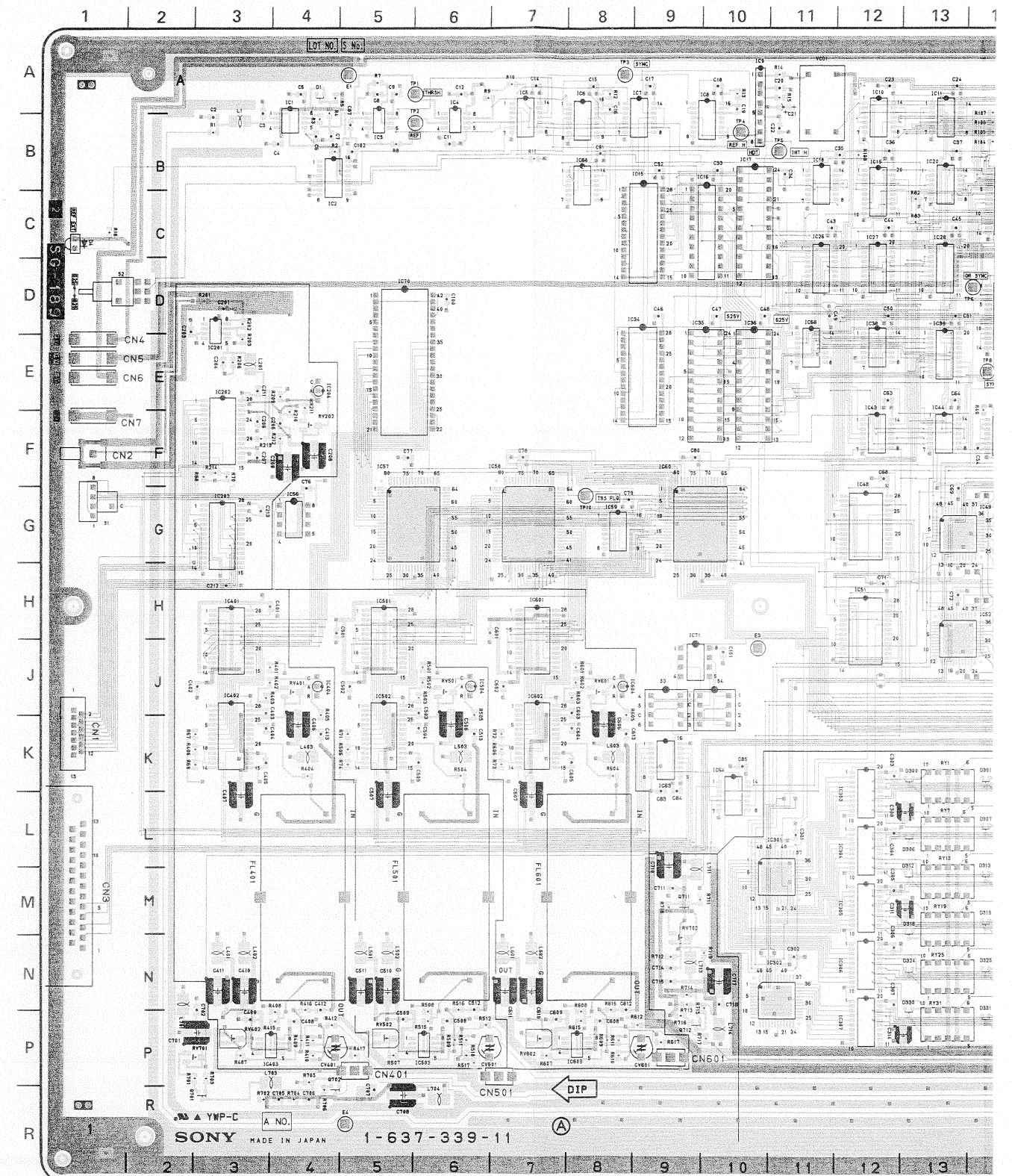
SG-189; SYNC GENERATOR BOARD

DVS-8000C

SG-189 (1-637-339-11)

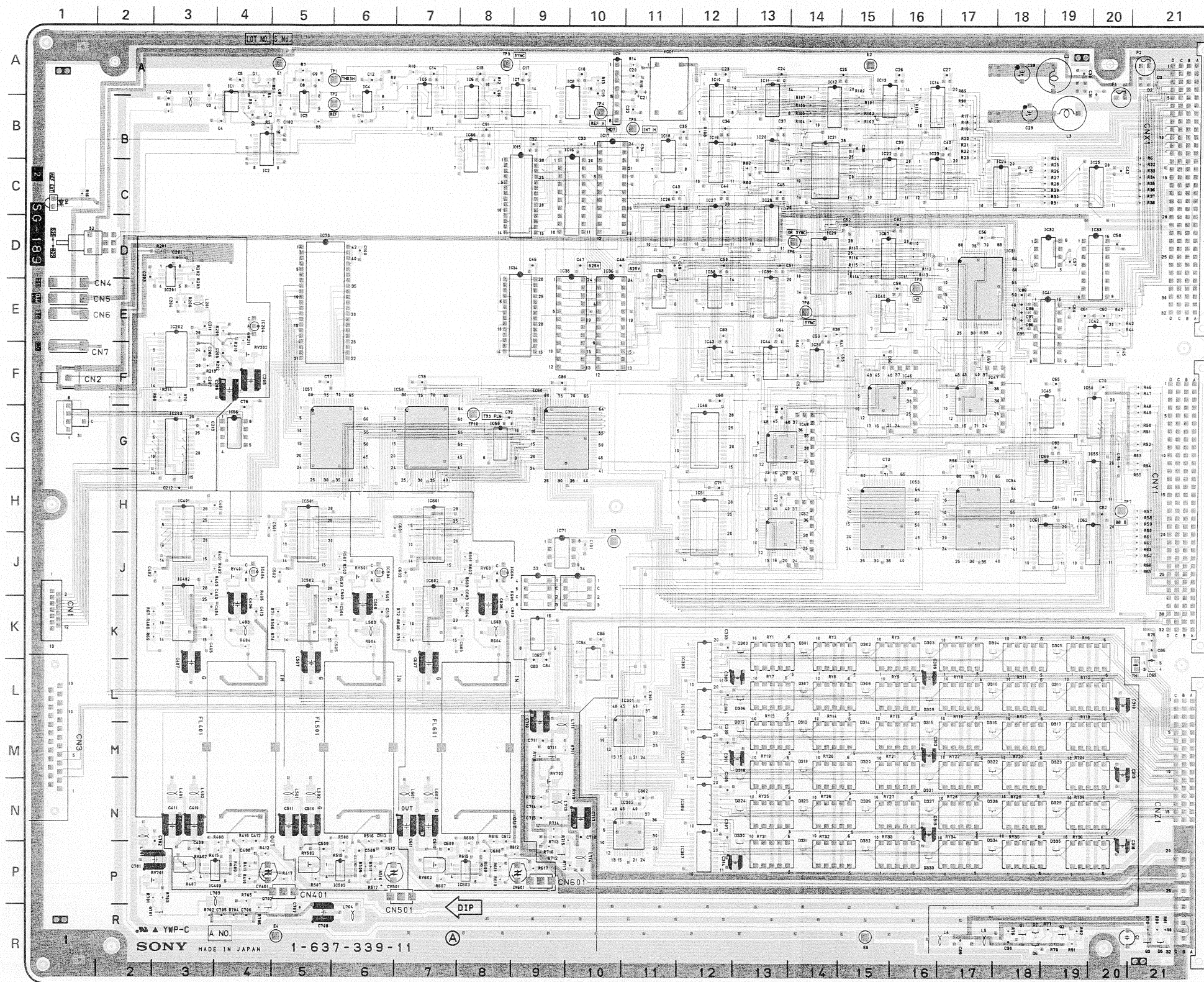
CNX1	B-21	FL401	M-3	IC61	H-18	RY14	L-14
		FL501	M-5	IC62	H-19	RY15	L-15
CNY1	H-21	FL601	M-7	IC63	K-9	RY16	L-17
				IC64	K-9	RY17	L-18
CNZ1	N-21	F1	A-20	IC65	L-21	RY18	L-19
		F2	A-20	IC66	B-8	RY19	M-19
CN1	K-1			IC67	C-15	RY20	M-14
CN2	F-1	IC1	A-4	IC68	D-11	RY21	M-15
CN3	M-1	IC2	C-4	IC69	G-18	RY22	M-17
CN401	P-5	IC3	B-5	IC70	D-5	RY23	M-18
CN501	P-7	IC4	A-6	IC71	H-9	RY24	M-19
CN601	P-10	IC5	A-7	IC201	E-3	RY25	N-13
		IC6	A-8	IC202	E-3	RY26	N-14
CV401	P-4	IC7	A-8	IC203	G-3	RY27	N-15
CV501	P-7	IC8	A-9	IC204	E-4	RY28	N-17
CV601	P-9	IC9	A-10	IC301	L-10	RY29	N-18
		IC10	A-12	IC302	N-11	RY30	N-19
D1	A-4	IC11	A-13	IC303	K-11	RY31	N-13
D2	A-21	IC12	A-14	IC304	L-12	RY32	N-14
D3	A-21	IC13	A-15	IC305	M-12	RY33	N-15
D4	C-4	IC14	A-16	IC306	N-12	RY34	N-17
D5	R-21	IC15	B-8	IC307	P-12	RY35	N-18
D6	R-18	IC16	B-9	IC401	H-3	RY36	N-19
D7	R-18	IC17	B-10	IC402	J-3		
D300	K-13	IC18	B-11	IC403	P-4	S1	G-1
D301	K-14	IC19	B-12	IC404	J-4	S2	D-1
D302	K-15	IC20	B-13	IC501	H-5	S3	J-9
D303	K-16	IC21	B-14	IC502	J-5	S4	J-10
D304	K-17	IC22	B-15	IC503	P-6		
D305	K-19	IC23	B-16	IC504	J-6	TH1	L-21
D306	L-13	IC24	C-17	IC601	H-7		
D307	L-14	IC25	C-19	IC602	J-7	TP1	A-5
D308	L-15	IC26	C-11	IC603	P-8	TP2	A-5
D309	L-16	IC27	C-12	IC604	J-8	TP3	A-8
D310	L-17	IC28	C-13			TP4	B-10
D311	L-19	IC29	D-14	Q1	R-18	TP5	B-10
D312	L-13	IC30	E-14	Q2	R-19	TP6	D-13
D313	L-14	IC31	D-18	Q3	R-21	TP7	H-20
D314	L-15	IC32	D-18	Q701	R-2	TP8	E-14
D315	L-16	IC33	D-19	Q702	P-4	TP9	D-16
D316	L-17	IC34	D-8	Q711	M-9	TP10	G-8
D317	L-19	IC35	D-9	Q712	P-9		
D318	M-13	IC36	D-10			VC01	A-11
D319	M-14	IC38	D-12	RV202	F-4		
D320	M-15	IC39	D-13	RV401	J-4		
D321	M-16	IC40	E-15	RV402	P-3		
D322	M-17	IC41	E-18	RV501	J-6		
D323	M-19	IC42	E-18	RV502	P-5		
D324	N-13	IC43	E-12	RV601	J-8		
D325	N-14	IC44	E-13	RV602	P-7		
D326	N-15	IC45	F-18	RV701	P-3		
D327	N-16	IC46	F-15	RV702	M-9		
D328	N-17	IC47	F-17				
D329	N-19	IC48	F-12	RY1	K-13		
D330	N-13	IC49	G-14	RY2	K-14		
D331	N-14	IC50	F-19	RY3	K-15		
D332	N-15	IC51	H-12	RY4	K-17		
D333	P-16	IC52	H-14	RY5	K-18		
D334	N-17	IC53	H-16	RY6	K-19		
D335	N-19	IC54	H-18	RY7	L-13		
		IC55	G-18	RY8	L-14		
E1	A-5	IC56	G-4	RY9	L-15		
E2	A-15	IC57	F-5	RY10	L-17		
E3	H-10	IC58	F-7	RY11	L-18		
E4	R-5	IC59	G-8	RY12	L-19		
E5	R-15	IC60	F-9	RY13	L-13		

NOTE
 ** : **A SIDE
 **B) : **B SIDE



SG-189; SYNC GENERATOR BOARD

4 L-14
5 L-15
6 L-17
7 L-18
8 L-19
9 M-19
10 M-14
11 M-15
12 M-17
13 M-18
14 M-19
15 N-13
16 N-14
17 N-15
18 N-17
19 N-18
20 N-19
21 N-13
22 N-14
23 N-15
24 N-17
25 N-18
26 N-19
27 J-1
28 J-9
29 J-10
30 J-21
31 A-5
32 A-5
33 A-8
34 J-10
35 J-10
36 D-13
37 H-20
38 L-14
39 L-16
40 J-8
41 A-11



SG-189 -A SIDE-
1-637-339-11
DVS-8000C

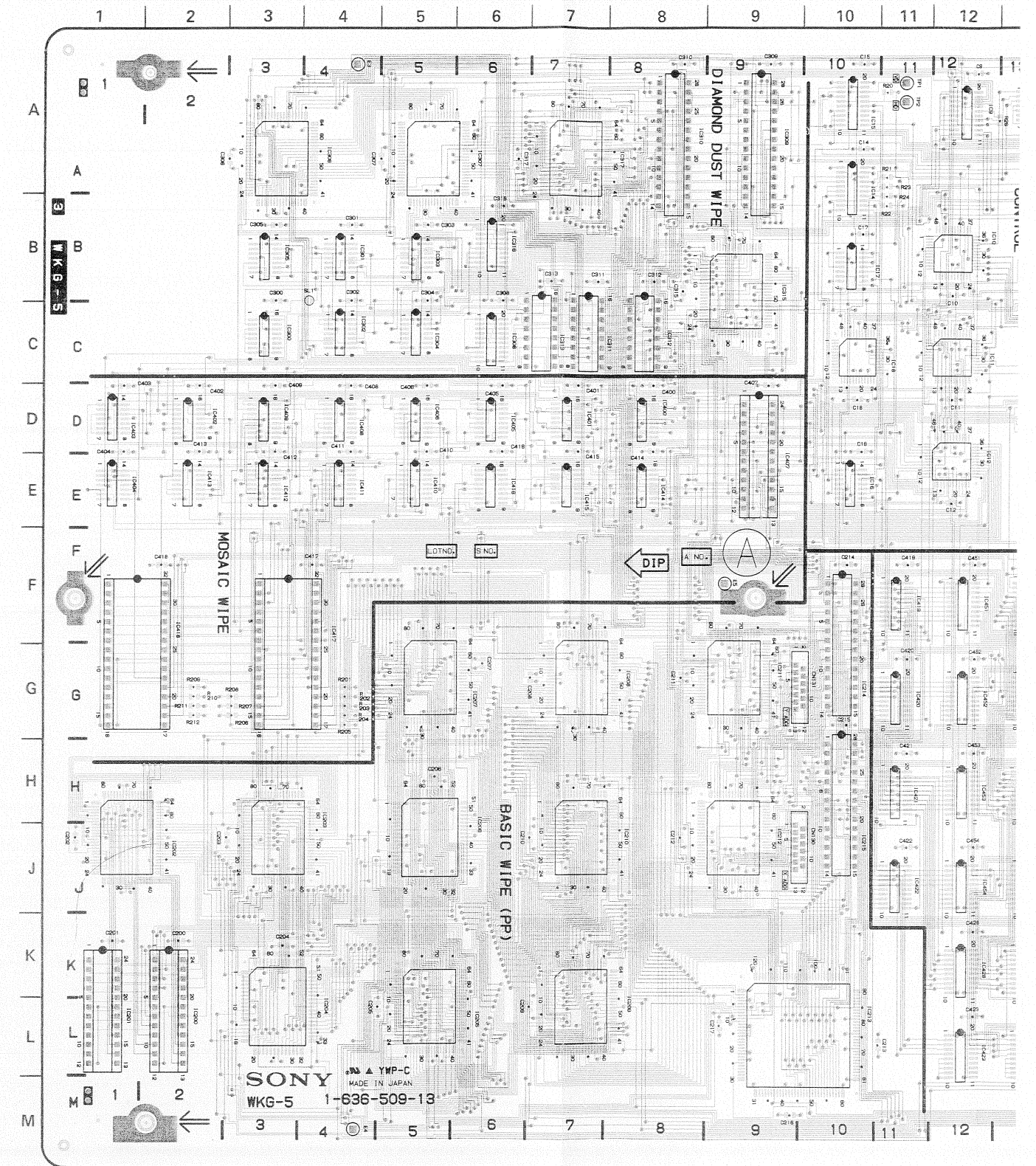
WKG-5; ENHANCED WIPE BOARD

DVS-8000C

WKG-5 (1-636-509-13)

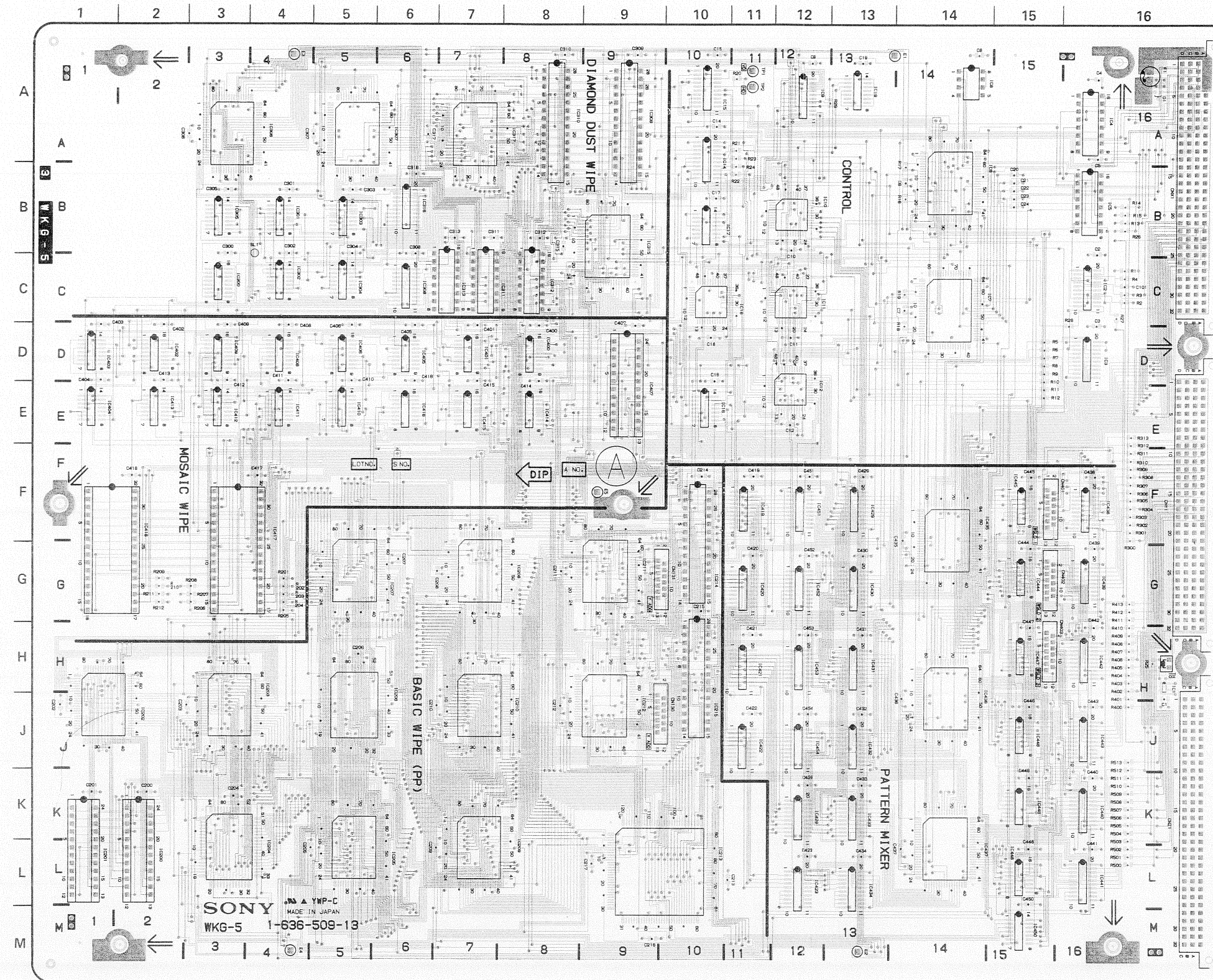
CNX1	B-16	IC309	A-9
		IC310	A-8
CNY1	F-16	IC311	C-8
		IC312	C-8
CNZ1	K-16	IC313	C-7
		IC315	B-9
		IC316	B-6
CN130	J-10	IC317	A-8
CN131	G-10	IC400	D-8
CN401	F-16	IC401	D-7
CN402	G-16	IC402	D-2
CN403	H-16	IC403	D-1
		IC404	E-1
D1	A-16	IC405	D-6
		IC406	D-5
E1	A-14	IC407	E-9
E2	M-13	IC408	D-4
E3	A-4	IC409	D-3
E4	M-4	IC410	E-5
E5	F-9	IC411	E-4
		IC412	E-3
F1	A-16	IC413	E-2
		IC414	E-8
IC1	H-16	IC415	E-7
IC2	C-16	IC416	E-6
IC3	D-16	IC417	F-4
IC4	A-16	IC418	F-2
IC5	B-16	IC419	F-11
IC6	B-14	IC420	G-11
IC7	C-14	IC421	H-11
IC8	A-14	IC422	J-11
IC9	A-12	IC423	L-12
IC10	B-12	IC428	K-12
IC11	C-12	IC429	F-13
IC12	E-12	IC430	G-13
IC14	A-10	IC431	H-13
IC15	A-10	IC432	J-13
IC16	E-10	IC433	K-13
IC17	B-10	IC434	L-13
IC18	C-11	IC435	F-14
IC19	A-13	IC436	H-14
IC200	L-2	IC437	L-14
IC201	L-1	IC438	F-16
IC202	J-2	IC439	G-16
IC203	H-4	IC440	K-16
IC204	L-4	IC441	L-16
IC205	L-6	IC442	H-16
IC206	H-6	IC443	J-16
IC207	G-6	IC444	G-15
IC208	G-8	IC445	F-15
IC209	L-8	IC446	J-15
IC210	J-8	IC447	H-15
IC211	G-9	IC448	L-15
IC212	J-9	IC449	K-15
IC213	L-10	IC450	M-15
IC214	G-10	IC451	F-12
IC215	J-10	IC452	G-12
IC300	C-3	IC453	H-12
IC301	B-4	IC454	J-12
IC302	C-4		
IC303	B-5	TH10	H-16
IC304	C-5		
IC305	B-3	TP1	A-11
IC306	A-4	TP2	A-11
IC307	A-6		
IC308	C-6		

NOTE
 ** : **A SIDE
 ***(B) : **B SIDE



WKG-5; ENHANCED WIPE BOARD

09 A-9
10 A-8
11 C-8
12 C-8
13 C-7
15 B-9
16 B-6
17 A-8
00 D-8
01 D-7
02 D-2
03 D-1
04 E-1
05 D-6
06 D-5
07 E-9
08 D-4
09 D-3
10 E-5
11 E-4
12 E-3
13 E-2
14 E-8
15 E-7
16 E-6
17 F-4
18 F-2
19 F-11
20 G-11
21 H-11
22 J-11
23 L-12
28 K-12
29 F-13
30 G-13
31 H-13
32 J-13
33 K-13
34 L-13
35 L-14
36 H-14
37 L-14
38 F-16
39 G-16
40 K-16
41 L-16
42 H-16
43 J-16
44 G-15
45 F-15
46 J-15
47 H-15
48 L-15
49 K-15
50 A-15
51 F-12
52 G-12
53 H-12
54 I-12
0 A-16
A-11
A-11



WKG-5 -A SIDE-
1-636-509-13
DVS-8000C

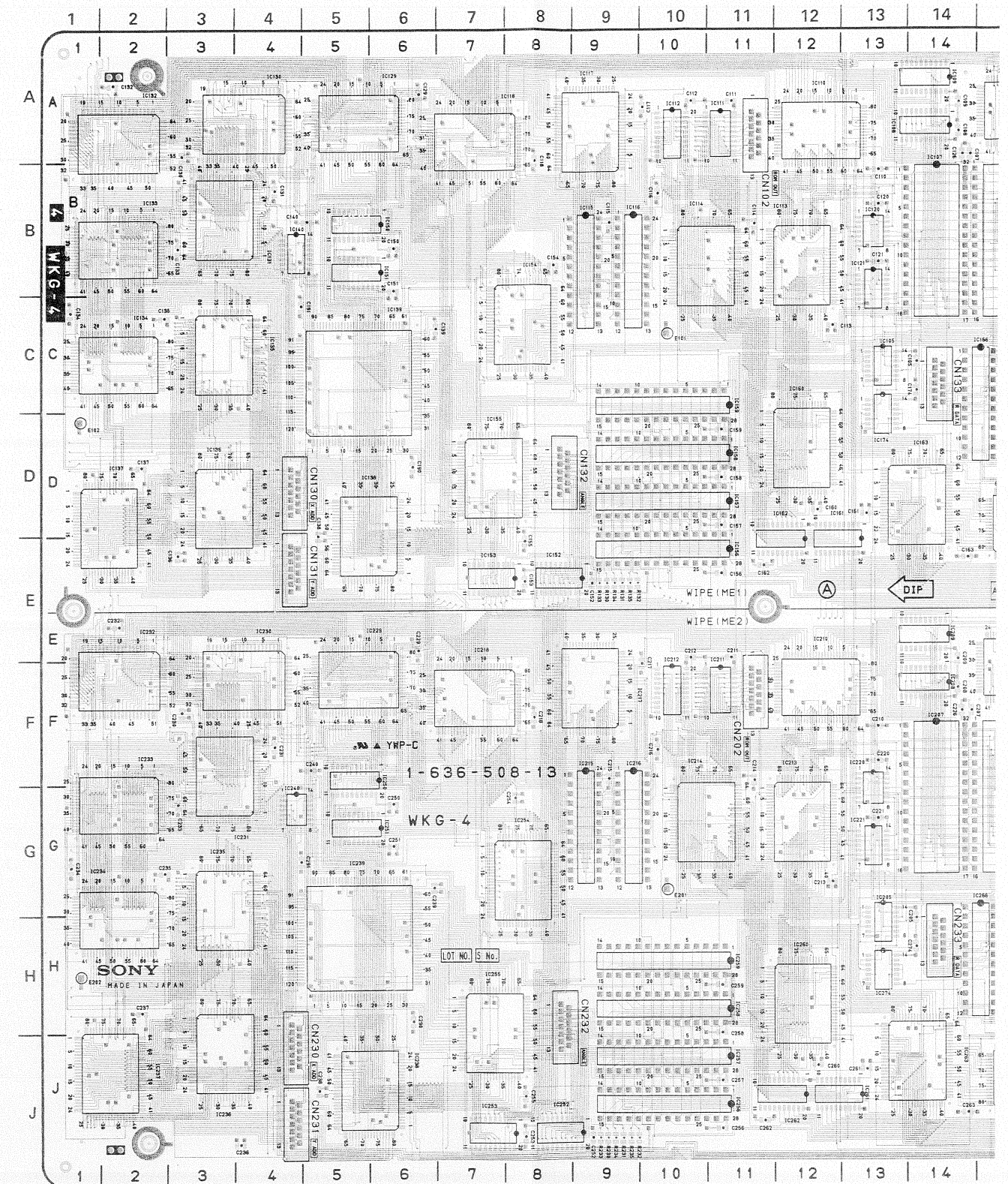
WKG-4; BASIC WIPE BOARD

DVS-8000C

WKG-4 (1-636-508-13)

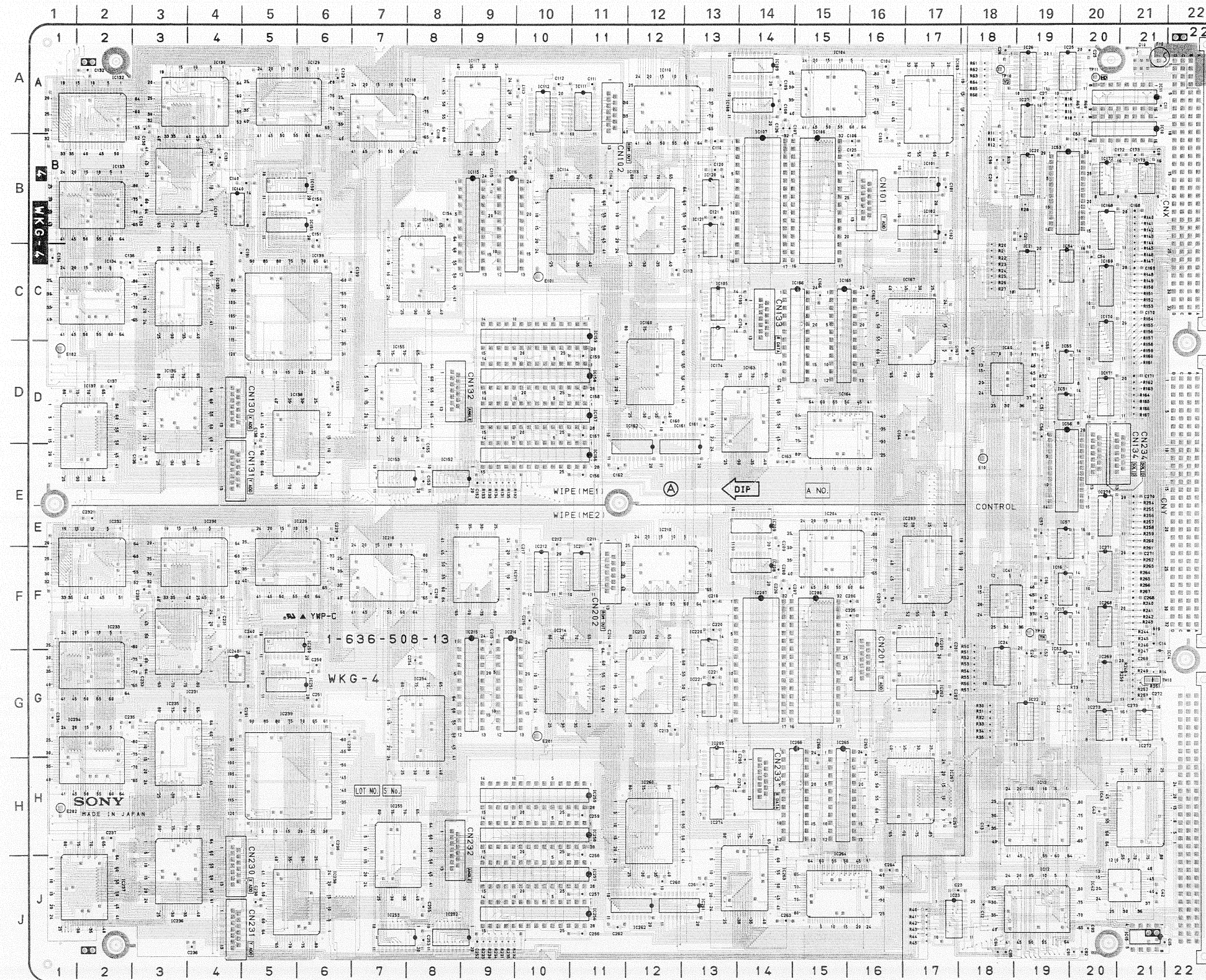
CNX1	B-22	IC109	A-14	IC218	F-7
CNY1	E-22	IC110	A-12	IC220	F-13
		IC111	A-11	IC221	G-13
CNZ1	H-22	IC112	A-12	IC229	E-5
		IC113	B-12	IC230	E-4
CN101	B-16	IC114	B-10	IC231	G-3
CN102	B-12	IC115	B-9	IC232	E-2
CN130	D-5	IC116	B-9	IC233	F-2
CN131	E-5	IC117	A-9	IC234	G-2
CN132	D-9	IC118	A-7	IC235	G-3
CN133	C-14	IC120	B-13	IC236	J-3
CN134	E-21	IC121	B-13	IC237	J-2
CN201	G-16	IC129	A-6	IC238	J-6
CN202	F-11	IC130	A-4	IC239	G-5
CN230	J-5	IC131	B-4	IC240	G-4
CN231	J-5	IC132	A-2	IC250	F-5
CN232	H-9	IC133	B-2	IC251	G-5
CN233	H-14	IC134	C-2	IC252	J-8
CN234	E-21	IC135	C-4	IC253	J-7
		IC136	D-3	IC254	G-8
		IC137	D-2	IC255	H-7
D-10	A-21	IC138	D-5	IC256	J-11
		IC139	C-6	IC257	J-11
E-10	E-18	IC140	B-4	IC258	H-11
E-101	C-10	IC150	B-5	IC259	H-11
E-102	D-1	IC151	B-5	IC260	H-12
E-201	G-10	IC152	E-8	IC261	J-13
E-202	H-1	IC153	E-7	IC262	J-12
		IC154	B-8	IC263	J-14
F-10	A-21	IC155	D-7	IC264	J-15
		IC156	E-11	IC265	H-15
IC10	A-21	IC157	D-11	IC266	H-15
IC11	A-21	IC158	D-11	IC267	H-17
IC12	J-19	IC159	C-11	IC268	F-20
IC13	H-19	IC160	D-12	IC269	G-20
IC14	G-22	IC161	D-12	IC270	E-20
IC15	J-21	IC162	D-12	IC271	F-20
IC16	F-19	IC163	D-14	IC272	G-21
IC17	F-19	IC164	D-15	IC273	G-20
IC20	B-19	IC165	C-15	IC274	H-13
IC21	C-19	IC166	C-15		
IC22	G-19	IC167	C-17	TH10	G-22
IC23	J-17	IC168	B-20		
IC24	G-18	IC169	C-20	TP10	A-18
IC25	A-19	IC170	C-20	TP11	A-20
IC26	A-19	IC171	D-20	TP12	F-19
IC27	A-19	IC172	B-20		
IC40	D-18	IC173	B-21		
IC41	F-18	IC174	D-13		
IC42	J-20	IC201	F-17		
IC43	H-20	IC202	G-17		
IC51	D-19	IC203	E-17		
IC52	G-19	IC204	E-15		
IC53	B-19	IC205	G-13		
IC54	C-19	IC206	F-15		
IC55	D-19	IC207	F-14		
IC56	D-19	IC208	F-14		
IC57	E-19	IC209	E-14		
IC101	B-17	IC210	E-12		
IC102	B-17	IC211	F-11		
IC103	A-17	IC212	F-10		
IC104	A-15	IC213	F-12		
IC105	C-13	IC214	G-10		
IC106	B-15	IC215	F-9		
IC107	B-14	IC216	F-9		
IC108	A-13	IC217	F-9		

NOTE
 ** : **A SIDE
 ** (B) : **B SIDE



WKG-4; BASIC WIPE BOARD

18 F-7
20 F-13
21 G-13
29 E-5
30 E-4
31 G-3
32 E-2
33 F-2
34 G-2
35 G-3
36 J-3
37 J-2
38 J-6
39 G-5
40 G-4
50 F-5
51 G-5
52 J-8
53 I-7
54 G-8
55 I-7
56 J-11
57 J-11
58 I-11
59 I-11
60 I-12
61 J-13
62 J-12
63 I-14
64 I-15
65 I-15
66 H-15
67 H-17
68 I-20
69 I-20
70 I-20
71 F-20
72 G-21
73 I-20
74 I-13
0 G-22
0 I-18
1 I-20
2 I-19



WKG-4-A SIDE-
1-636-508-13
DVS-8000C

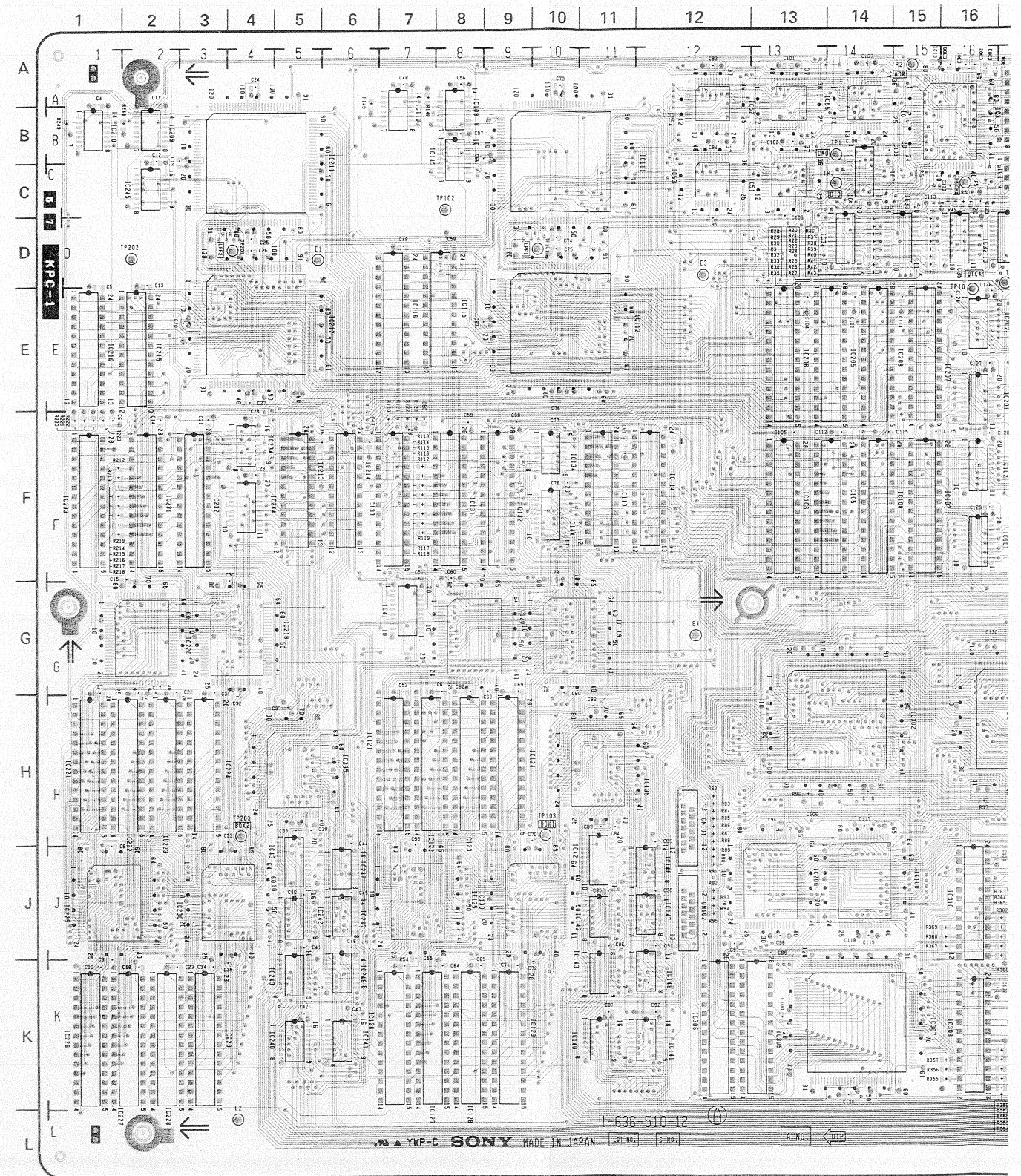
KPC-1; KEY PROCESSOR BOARD

DVS-8000C

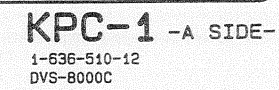
KPC-1 (1-636-510-12)

CNX1	B-23	IC121	H-6	IC240	K-4
		IC122	H-7	IC241	K-6
CNY1	G-23	IC123	H-8	IC242	J-6
		IC124	H-10	IC243	K-4
CNZ1	K-23	IC125	J-8	IC244	F-4
		IC126	K-6	IC245	C-2
CN101	H-12	IC127	K-7	IC246	J-6
CN102	J-12	IC128	K-8	IC247	J-6
CN110	E-18	IC129	K-10	IC248	K-6
		IC130	J-8	IC300	E-22
D1	B-23	IC131	F-8	IC301	F-22
		IC132	F-9	IC302	H-15
E1	D-5	IC133	F-6	IC303	H-19
E2	K-4	IC134	F-10	IC304	H-22
E3	D-12	IC135	H-12	IC305	K-13
E4	G-12	IC136	J-21	IC306	K-12
E5	H-19	IC137	J-21	IC307	K-15
		IC138	J-19	IC308	K-16
F1	A-23	IC139	J-19	IC309	K-18
		IC140	K-10	IC310	J-16
IC1	B-17	IC141	K-12	IC311	J-18
IC2	B-18	IC142	J-10	IC312	K-23
IC3	B-16	IC143	J-10	IC313	K-22
IC4	C-17	IC144	F-10	IC314	J-22
IC5	H-23	IC145	B-7		
IC6	D-19	IC146	J-12	TH1	H-23
IC7	C-14	IC147	J-12		
IC8	C-21	IC148	K-12	TP1	B-14
IC20	B-22	IC200	J-13	TP2	A-15
IC21	B-21	IC201	E-17	TP3	C-14
IC22	B-20	IC202	E-17	TP4	B-20
IC30	C-22	IC203	E-18	TP5	C-16
IC31	C-19	IC204	E-18	TP6	B-20
IC32	D-16	IC205	E-14	TP7	A-22
IC33	C-15	IC206	E-13	TP8	D-17
IC34	D-13	IC207	E-16	TP9	B-23
IC35	D-16	IC208	E-15	TP10	E-16
IC36	B-19	IC209	B-2	TP101	D-10
IC37	C-18	IC210	B-1	TP102	C-8
IC41	G-7	IC211	B-6	TP103	H-9
IC42	J-10	IC212	E-6	TP201	D-4
IC43	J-4	IC213	F-5	TP202	D-2
IC51	C-13	IC214	F-6	TP203	H-4
IC52	B-13	IC215	E-2		
IC53	C-12	IC216	E-1		
IC54	B-12	IC219	G-5		
IC55	B-13	IC220	G-3		
IC100	J-15	IC221	H-1		
IC101	F-17	IC222	H-2		
IC102	F-17	IC223	H-2		
IC103	F-18	IC224	H-4		
IC104	F-18	IC225	J-1		
IC105	F-14	IC226	K-1		
IC106	F-13	IC227	L-2		
IC107	F-16	IC228	L-2		
IC108	F-15	IC229	K-4		
IC109	B-8	IC230	J-2		
IC110	B-7	IC231	F-2		
IC111	C-12	IC232	F-3		
IC112	E-12	IC233	F-1		
IC113	F-11	IC234	F-4		
IC114	F-12	IC235	H-6		
IC115	E-8	IC236	K-21		
IC116	E-7	IC237	K-21		
IC119	G-11	IC238	K-19		
IC120	G-9	IC239	K-19		

NOTE
*-A SIDE
*(B); *-B SIDE



K-4
K-6
J-6
K-
F-
C-2
J-6
J-6
K-1
E-
F-22
H-15
H-19
H-
K-
K-12
K-15
K-16
K-
J-1
J-10
K-23
K-22
J-2
H-20
B-14
A-
C-
B-20
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H-4



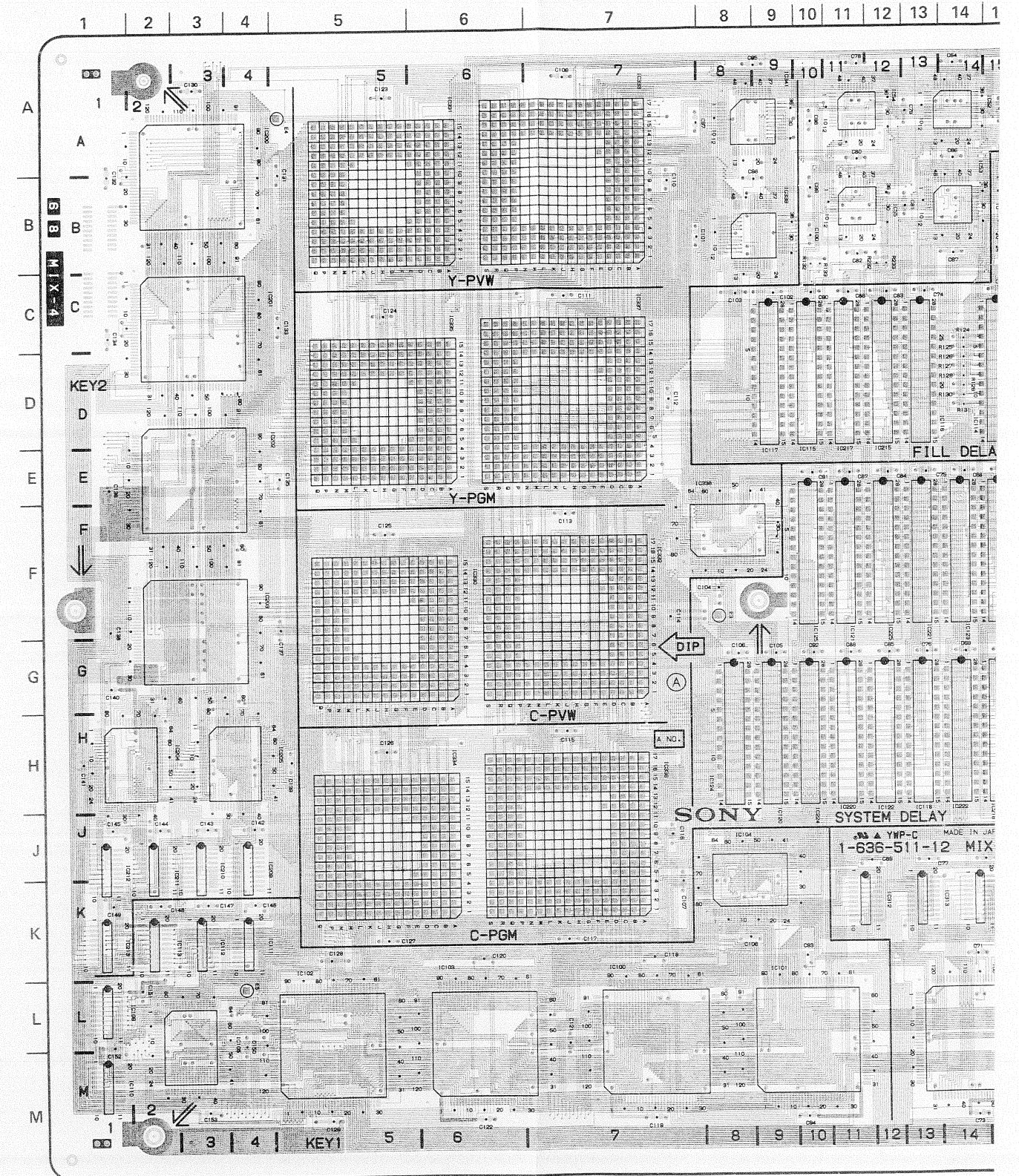
MIX-4 (A) ; MIXER BOARD

DVS-8000C

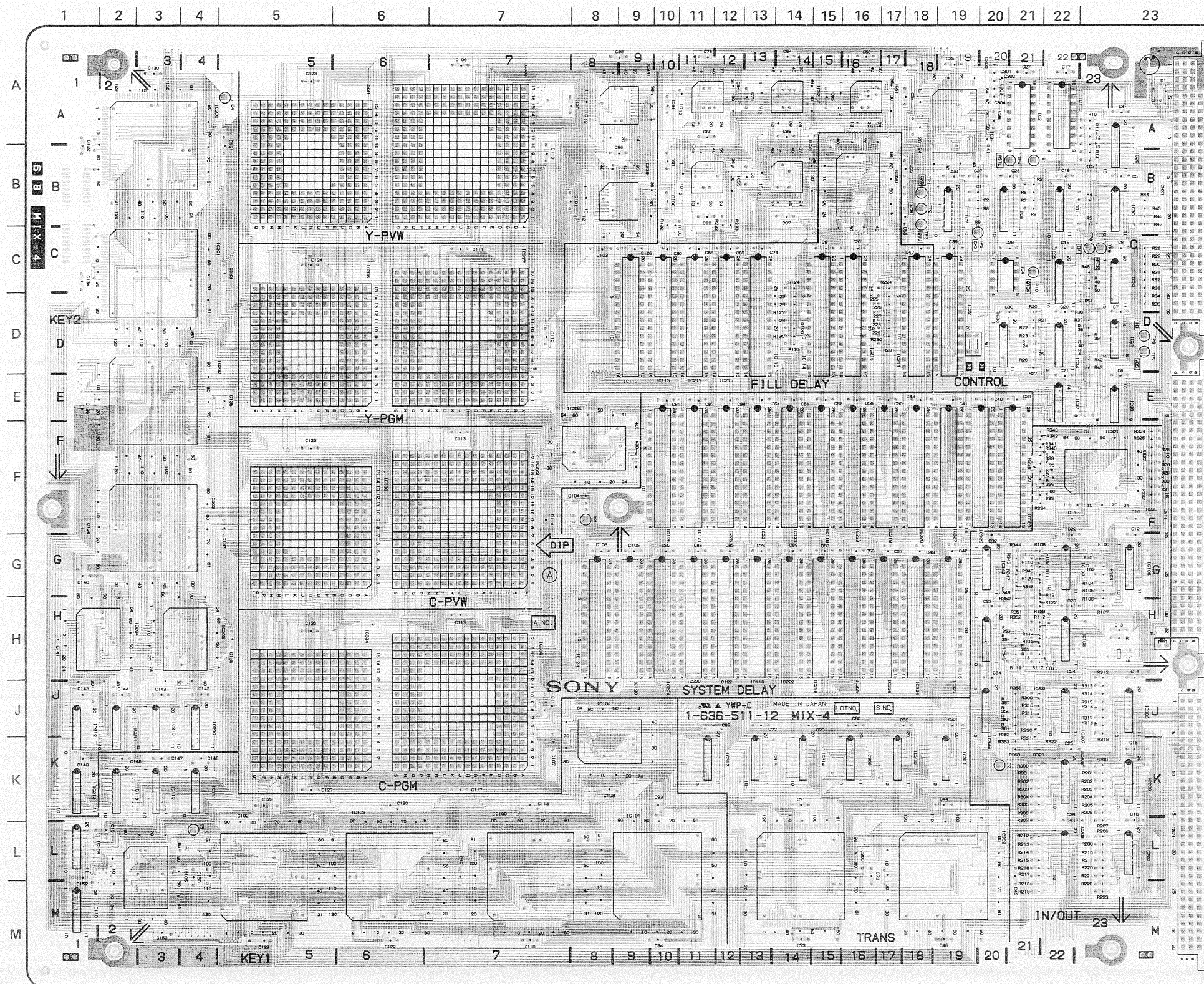
MIX-4 (A) (1-636-511-12)

CNX1	B-23	IC201	C-4	TP4	B-21
		IC202	D-4	TP5	C-20
CNY1	F-23	IC203	F-4	TP6	D-23
		IC204	H-2	TP7	D-23
CNZ1	L-23	IC205	H-4	TP8	C-23
		IC206	K-23	TP9	C-23
D-1	A-23	IC207	L-23	TP10	C-21
		IC208	L-22		
E1	B-20	IC209	J-4		
E2	K-20	IC210	J-3		
E3	F-8	IC211	J-2		
E4	A-5	IC212	J-1		
E5	L-4	IC213	K-1		
		IC214	D-17		
F1	A-23	IC215	E-12		
		IC216	D-16		
IC1	A-22	IC217	E-11		
IC2	A-21	IC218	H-15		
IC3	A-20	IC219	F-17		
IC4	C-21	IC220	H-11		
IC5	H-23	IC221	F-13		
IC7	B-19	IC222	H-14		
IC8	B-21	IC223	F-16		
IC20	B-23	IC224	H-10		
IC21	D-23	IC225	F-12		
IC22	C-19	IC300	L-16		
IC30	B-23	IC302	L-20		
IC31	B-22	IC306	K-22		
IC32	C-23	IC307	J-22		
IC33	D-20	IC308	J-23		
IC34	D-22	IC309	K-16		
IC35	C-22	IC310	K-18		
IC36	E-23	IC311	K-19		
IC37	E-22	IC312	K-14		
IC51	A-17	IC313	K-14		
IC52	A-15	IC314	K-15		
IC53	B-14	IC320	B-17		
IC54	A-12	IC321	F-23		
IC55	B-12	IC322	H-19		
IC100	K-7	IC323	F-21		
IC101	K-9	IC324	H-18		
IC102	K-5	IC325	F-20		
IC103	K-6	IC326	H-17		
IC104	J-8	IC327	F-19		
IC105	L-4	IC328	H-16		
IC106	G-23	IC329	F-18		
IC107	G-22	IC330	F-6		
IC108	H-22	IC331	A-6		
IC109	L-1	IC332	F-7		
IC110	M-1	IC333	A-7		
IC111	K-4	IC334	H-6		
IC112	K-3	IC335	C-6		
IC113	K-2	IC336	H-7		
IC114	D-14	IC337	C-7		
IC115	E-10	IC338	E-8		
IC116	D-13	IC339	B-9		
IC117	E-9	IC341	A-9		
IC118	H-13	IC342	G-20		
IC119	F-15	IC343	H-20		
IC120	H-9	IC344	J-20		
IC121	F-11				
IC122	H-12	TH1	H-23		
IC123	F-14				
IC124	H-8	TP1	B-18		
IC125	F-10	TP2	B-18		
IC200	A-4	TP3	C-18		

NOTE
 *A : *A SIDE
 *(B) : *B SIDE



MIX-4 (A); MIXER BOARD



MIX-4 (A) -A SIDE-
1-636-511-12
DVS-8000C

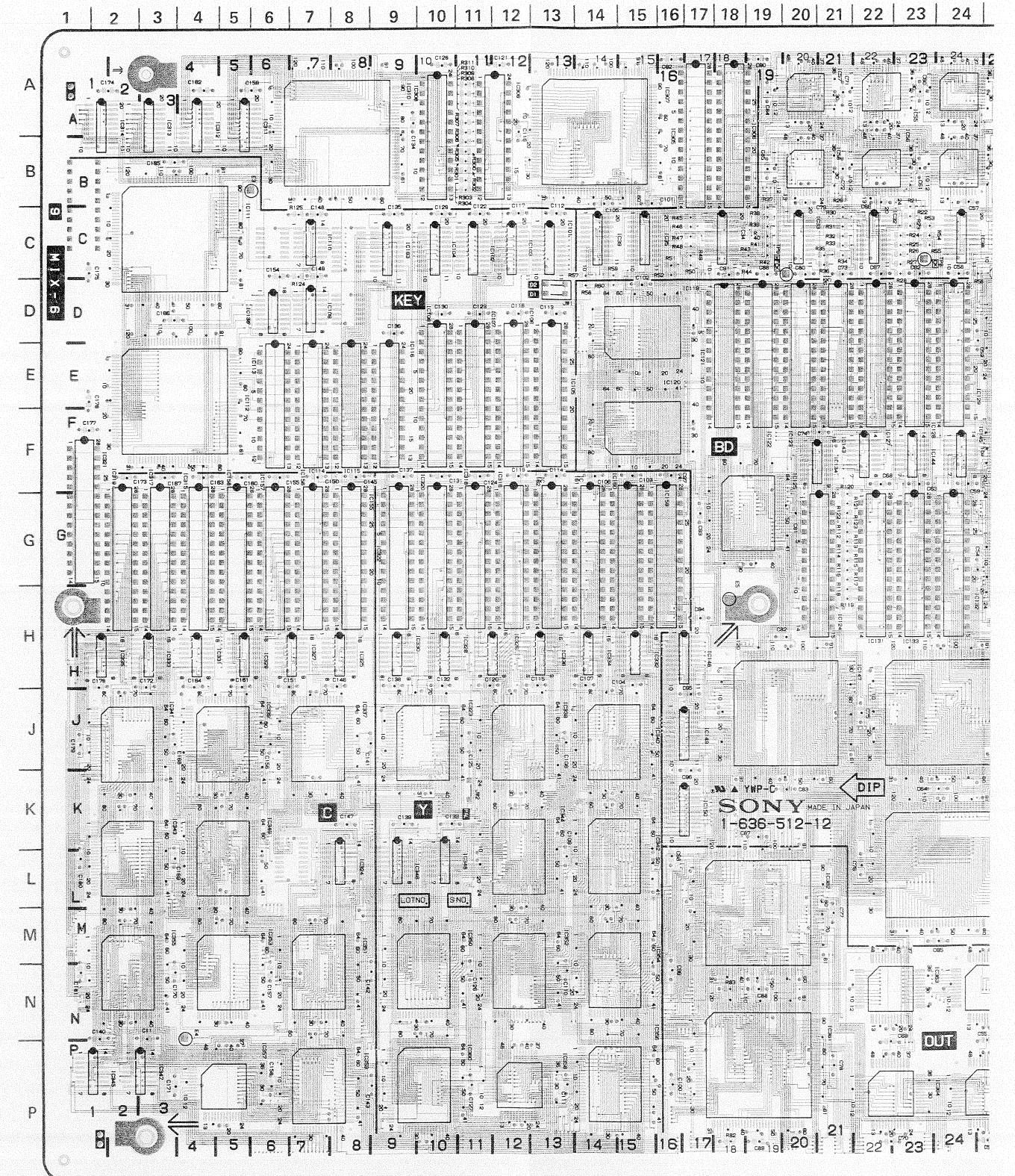
MIX-6 (A) ; DSK (DOWNSTREAM KEYER) BOARD

DVS-8000C

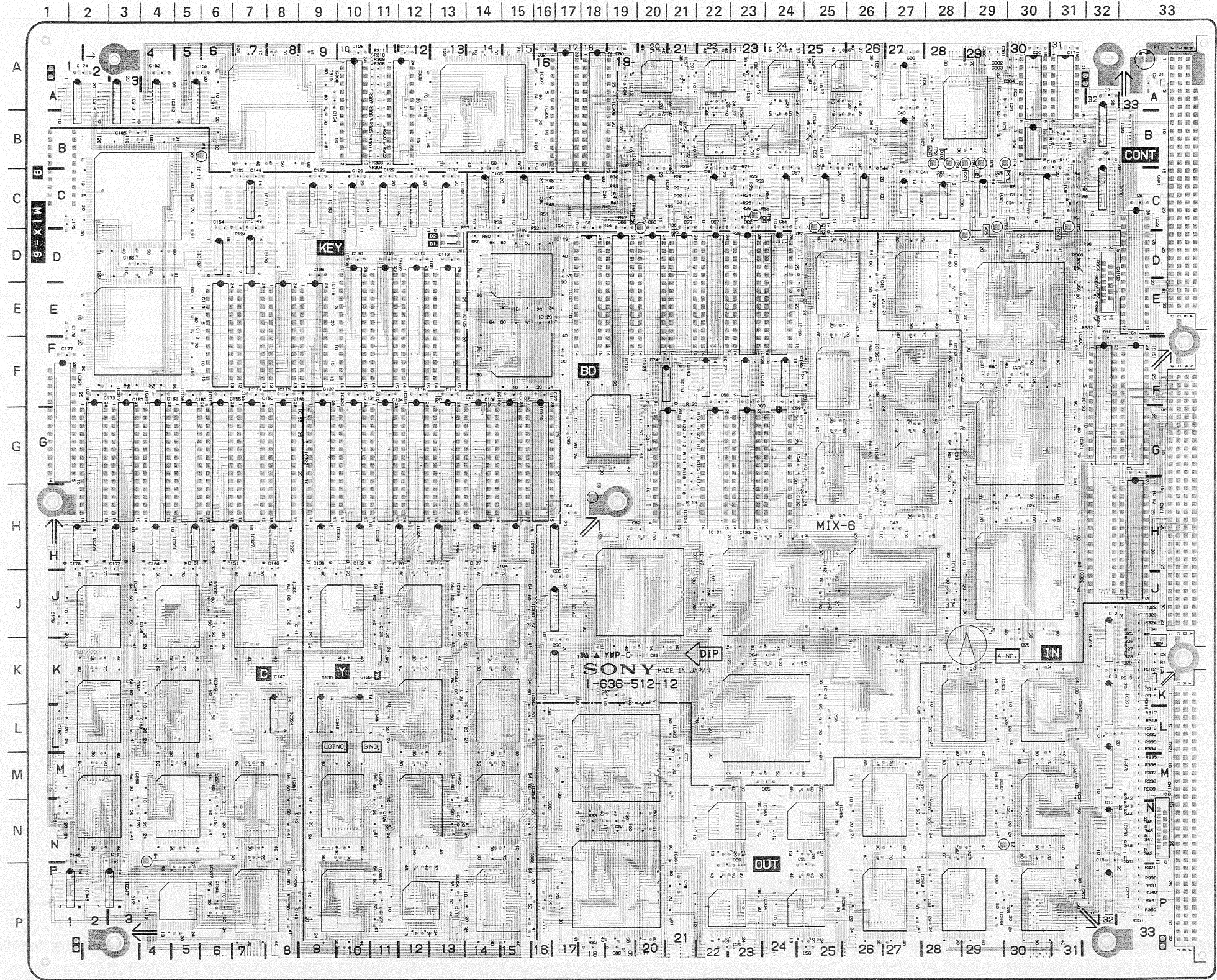
MIX-6 (A) (1-636-512-12)

CNX1	C-33	IC119	D-17	IC323	J-11	TP9	C-20
CNY1	H-33	IC120	E-16	IC324	L-8	TP10	C-25
CNZ1	L-33	IC121	F-17	IC325	H-8		
CN100	D-32	IC122	F-19	IC326	H-12		
CN110	M-33	IC123	F-20	IC327	H-7		
		IC124	H-21	IC328	H-11		
D1	A-33	IC125	F-20	IC329	H-6		
E1	D-29	IC126	D-21	IC330	H-10		
E2	N-30	IC127	F-22	IC331	H-5		
E3	B-6	IC128	E-23	IC332	H-16		
E4	N-4	IC129	E-24	IC333	H-3		
E5	H-18	IC130	E-26	IC334	H-14		
		IC131	H-22	IC335	H-2		
F1	A-33	IC132	H-24	IC336	H-13		
		IC133	H-23	IC337	J-8		
		IC134	F-21	IC338	J-13		
		IC135	F-26	IC339	J-6		
		IC136	G-26	IC340	J-16		
IC1	A-31	IC138	D-6	IC341	J-2		
IC2	A-30	IC139	F-28	IC342	K-16		
IC3	A-29	IC140	H-28	IC343	K-3		
IC4	B-30	IC141	H-28	IC344	K-13		
IC5	K-33	IC142	H-25	IC345	P-2		
IC6	A-27	IC143	F-21	IC346	L-10		
IC7	B-27	IC144	F-23	IC347	P-3		
IC8	C-31	IC145	F-24	IC348	L-11		
IC9	C-26	IC146	K-25	IC349	K-6		
IC20	B-33	IC147	H-22	IC350	N-11		
IC21	C-29	IC148	H-17	IC351	N-8		
IC22	C-33	IC149	J-17	IC352	N-13		
IC30	C-33	IC150	K-17	IC353	M-6		
IC31	C-25	IC151	F-33	IC354	M-16		
IC32	C-22	IC152	H-33	IC355	M-4		
IC33	C-20	IC153	F-32	IC356	N-16		
IC34	C-18	IC155	G-9	IC357	P-6		
IC35	C-16	IC156	F-7	IC358	P-12		
IC36	C-28	IC157	F-6	IC359	P-8		
IC37	C-27	IC158	F-5	IC360	P-11		
IC38	C-25	IC159	G-16	IC361	N-21		
IC39	C-15	IC160	F-15	IC362	L-21		
IC51	A-26	IC161	F-14	IC363	N-24		
IC52	B-26	IC162	F-13	IC364	P-24		
IC53	A-25	IC163	C-9	IC365	N-25		
IC54	B-25	IC300	E-31	IC366	P-25		
IC55	A-23	IC301	G-31	IC367	M-29		
IC56	B-23	IC302	J-31	IC368	P-27		
IC57	A-21	IC303	K-29	IC369	P-29		
IC58	B-21	IC304	L-31	IC370	N-27		
IC100	D-28	IC305	B-16	IC371	N-31		
IC101	C-13	IC306	B-19	IC372	P-31		
IC102	C-12	IC307	A-16	IC373	K-33		
IC103	C-13	IC308	A-10	IC374	J-32		
IC104	C-10	IC309	A-12	IC375	M-32		
IC105	D-13	IC310	A-9	IC376	N-33		
IC106	D-13	IC311	A-6	IC377	P-32		
IC107	D-12	IC312	A-4				
IC108	D-10	IC313	A-3	TH1	J-33		
IC109	D-7	IC314	A-2				
IC110	C-7	IC315	F-4	TP1	B-29		
IC111	C-5	IC316	F-12	TP2	B-28		
IC112	E-5	IC317	F-3	TP3	B-28		
IC113	E-6	IC318	F-11	TP4	B-30		
IC114	F-7	IC319	F-2	TP5	D-31		
IC115	F-8	IC320	F-10	TP6	B-29		
IC116	E-6	IC321	F-1	TP7	D-29		
		IC322	G-9	TP8	C-23		

NOTE
 - : *-A SIDE
 *-(B) : *-B SIDE



MIX-6 (A) ; DSK (DOWNSTREAM KEYS) BOARD



MIX-6 (A) -A SIDE-
1-636-512-12
DVS-8000C

OUT-2; OUTPUT PROCESSOR BOARD

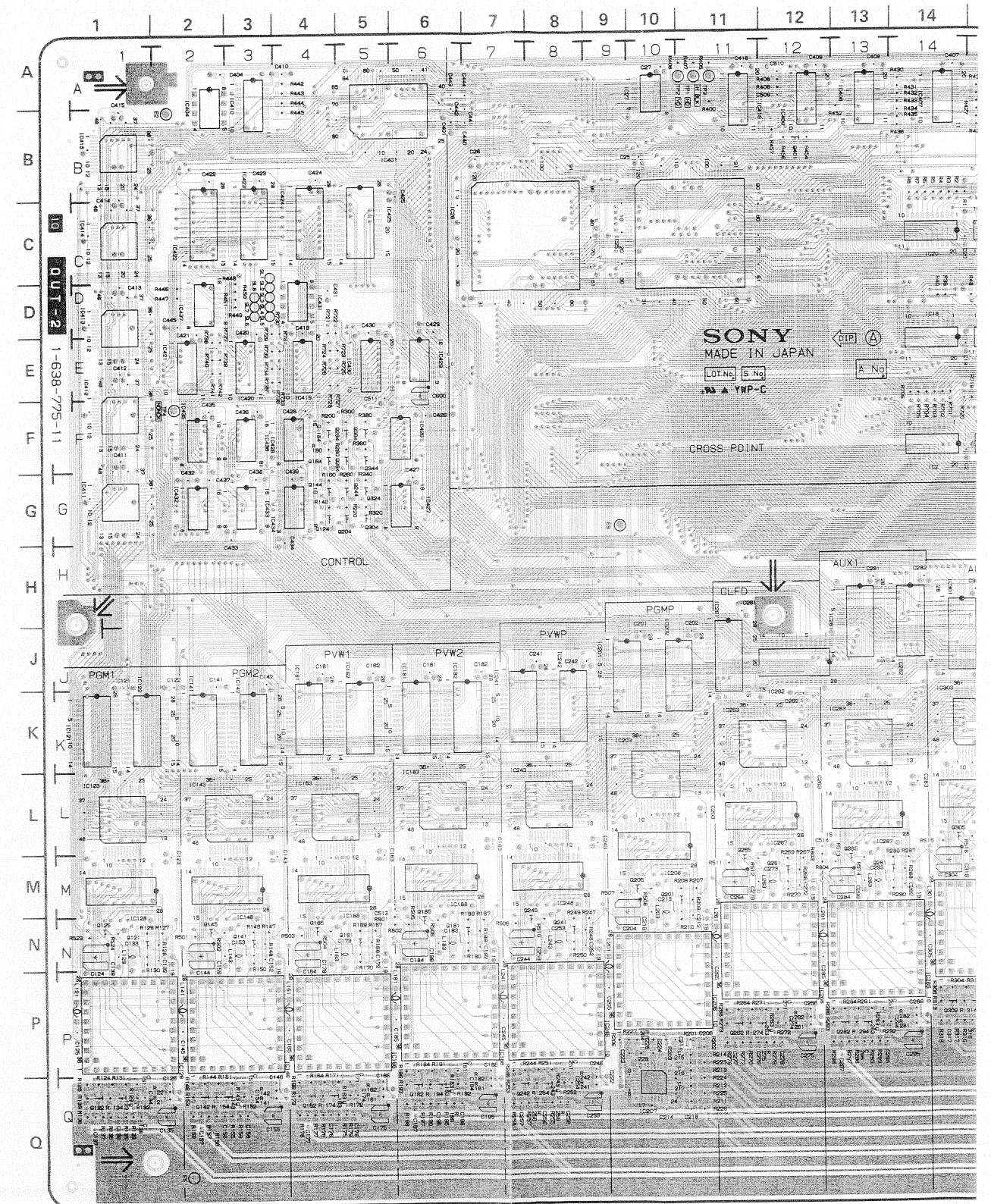
DVS-8000C

OUT-2 (1-638-775-11)

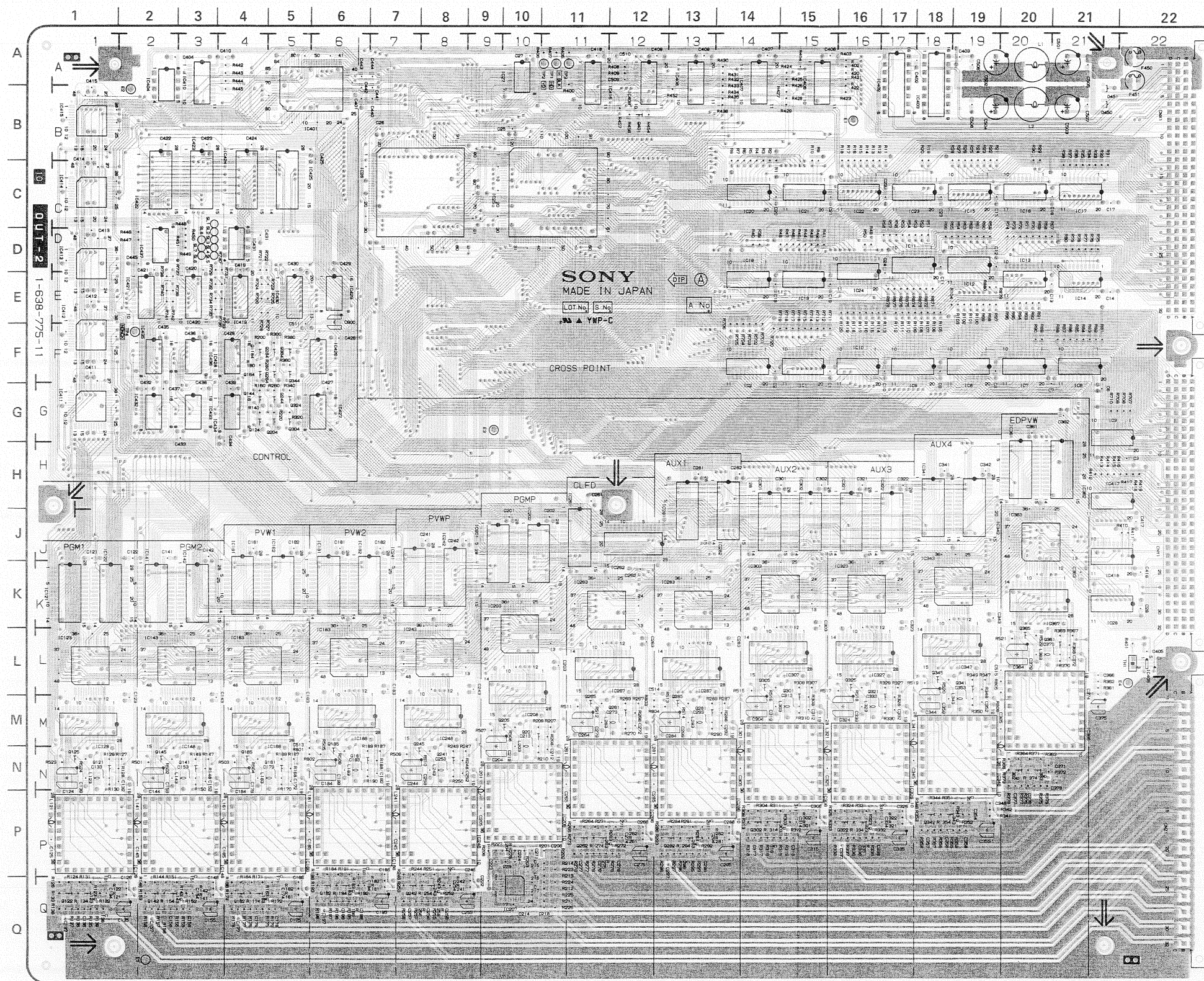
CNX1	B-22	IC203	K-9	IC428	F-3	Q364	F-5
		IC206	P-11	IC429	E-6	Q365	K-20
CNY1	J-11	IC207	Q-10	IC430	E-5	Q401	B-12
		IC208	M-10	IC431	D-4		
CNZ1	P-22	IC241	J-7	IC432	G-2	TH1	L-22
		IC242	J-8	IC433	G-3		
D450	B-21	IC243	L-7	IC434	G-3	TP1	A-11
D451	B-21	IC246	P-9	IC435	F-2	TP2	A-11
		IC248	M-8	IC436	F-3	TP3	A-11
						TP4	F-2
E1	B-16	IC261	H-11	Q121	N-1		
E2	B-2	IC262	K-12	Q122	Q-1		
E3	G-9	IC263	K-11	Q123	Q-1		
E4	L-22	IC266	P-12	Q124	G-4		
E5	Q-2	IC267	L-12	Q125	N-1		
		IC281	H-12	Q141	N-3		
F450	A-22	IC282	J-14	Q142	Q-2		
F451	B-21	IC283	K-13	Q143	Q-3		
		IC286	P-14	Q144	G-4		
		IC287	L-13	Q145	N-2		
IC1	G-15	IC301	H-14	Q161	N-5		
IC2	G-14	IC302	H-15	Q162	Q-4		
IC3	G-21	IC303	K-14	Q163	Q-4		
IC6	G-21	IC306	P-15	Q164	F-4		
IC7	G-20	IC307	L-15	Q165	N-4		
IC8	G-19	IC321	H-16	Q181	N-6		
IC9	G-17	IC322	H-17	Q182	Q-6		
IC10	F-16	IC323	K-16	Q183	Q-6		
IC11	D-17	IC326	P-17	Q184	F-4		
IC12	E-19	IC327	L-17	Q185	M-6		
IC13	D-20	IC341	H-18	Q201	M-10		
IC14	E-21	IC342	J-20	Q204	G-5		
IC15	C-19	IC343	J-18	Q205	M-10		
IC16	C-20	IC346	N-20	Q241	N-8		
IC17	C-21	IC347	L-19	Q242	Q-7		
IC18	D-14	IC361	G-20	Q243	Q-8		
IC19	E-15	IC362	H-21	Q244	G-5		
IC20	C-14	IC363	J-20	Q245	M-8		
IC21	C-15	IC366	M-21	Q261	M-12		
IC22	C-16	IC367	K-21	Q262	P-11		
IC23	C-17	IC401	B-6	Q263	P-13		
IC24	E-16	IC402	A-16	Q264	F-5		
IC25	C-9	IC403	B-18	Q265	M-11		
IC26	C-6	IC404	A-2	Q281	M-13		
IC27	A-10	IC405	L-22	Q282	P-13		
IC28	K-21	IC406	A-15	Q283	P-13		
IC121	K-1	IC407	A-14	Q284	F-5		
IC122	J-1	IC408	A-13	Q285	M-13		
IC123	L-1	IC409	B-12	Q301	L-15		
IC126	P-2	IC410	A-3	Q302	P-14		
IC128	M-1	IC411	G-1	Q303	P-15		
IC141	J-2	IC412	E-1	Q304	G-5		
IC142	J-3	IC413	D-1	Q305	L-14		
IC143	L-2	IC414	C-1	Q321	L-16		
IC146	P-4	IC415	B-1	Q322	P-16		
IC148	M-3	IC416	B-12	Q323	P-16		
IC161	J-4	IC417	H-21	Q324	G-5		
IC162	J-5	IC418	K-21	Q325	L-16		
IC163	L-4	IC419	E-4	Q341	L-19		
IC166	P-5	IC420	E-3	Q342	P-18		
IC168	M-5	IC421	E-2	Q343	P-19		
IC181	J-6	IC422	C-2	Q344	F-5		
IC182	J-6	IC423	B-3	Q345	L-18		
IC183	L-6	IC424	B-4	Q361	L-21		
IC186	P-7	IC425	C-6	Q362	N-20		
IC188	M-6	IC426	F-6	Q363	N-20		
IC201	J-9	IC427	G-6				
IC202	J-10						

NOTE

***: **A SIDE
 ***(B): **B SIDE



OUT-2; OUTPUT PROCESSOR BOARD

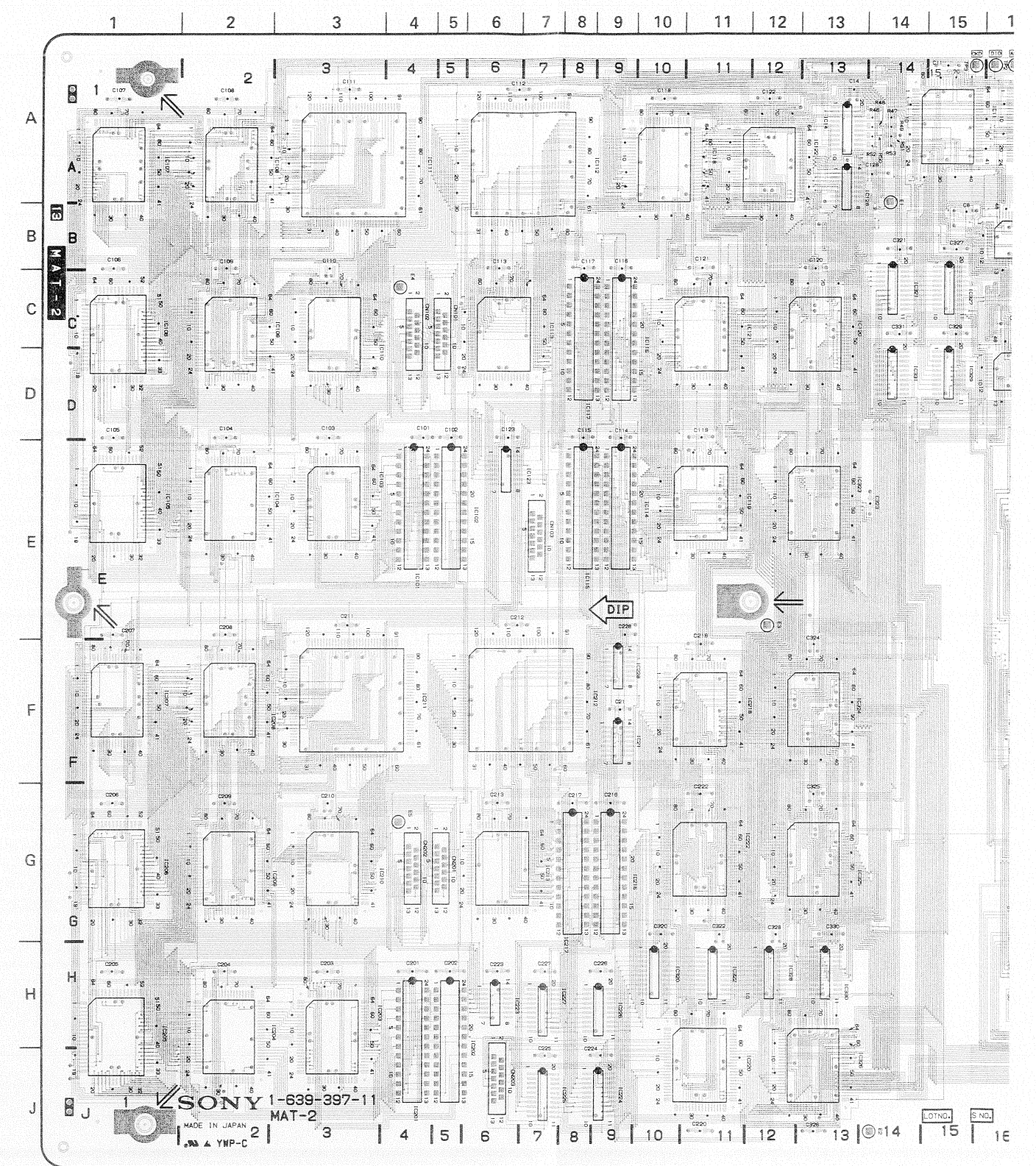


OUT-2 -A SIDE-
1-638-775-11
DVS-8000C

MAT-2; MATTE GENERATOR BOARD

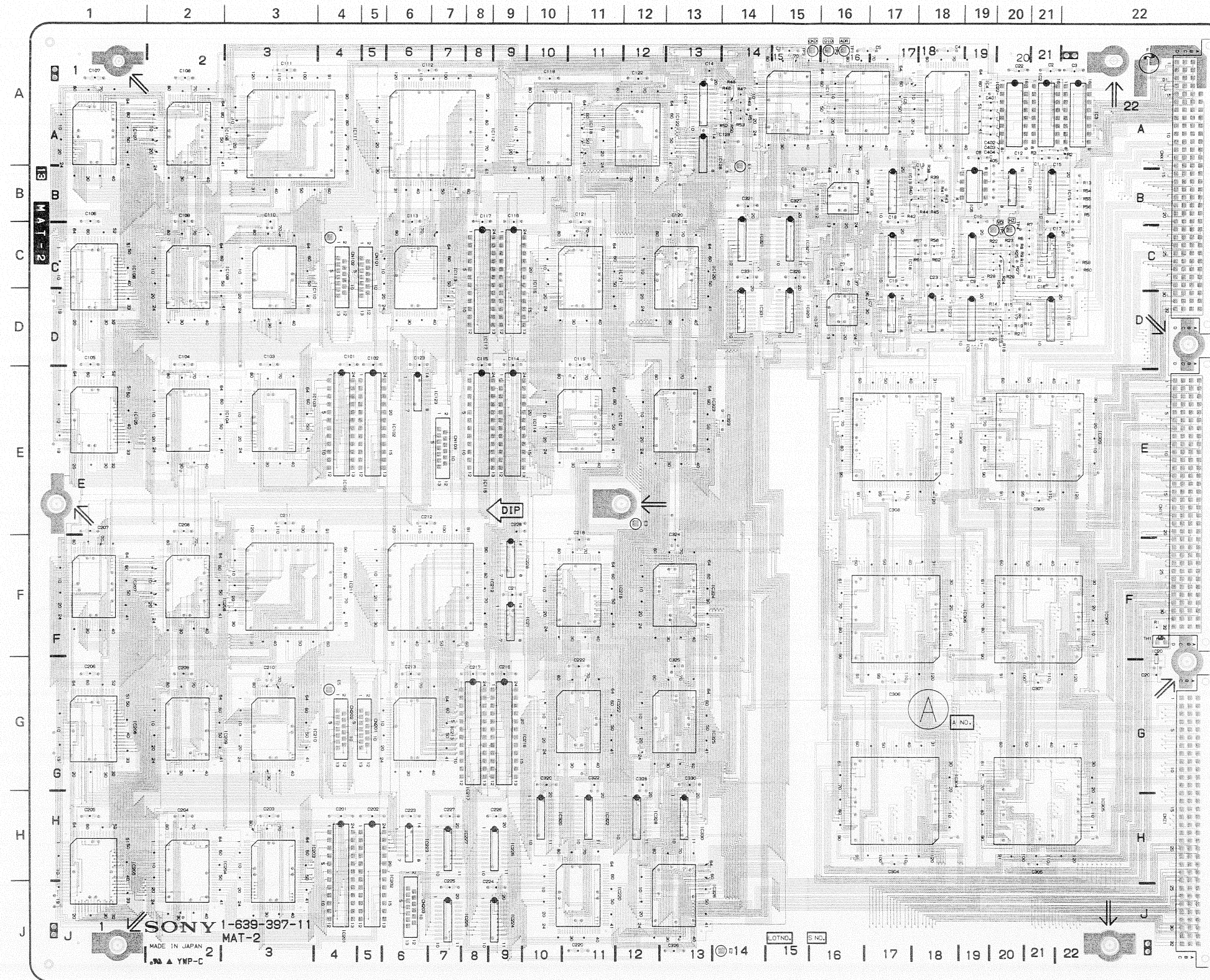
DVS-8000C			
MAT-2 (1-639-397-11)			
CNX1	B-22	IC122	A-13
		IC123	E-7
CNY1	E-22	IC128	A-13
		IC201	J-4
CNZ1	H-22	IC202	H-6
		IC203	H-4
CN101	C-5	IC204	H-3
CN102	C-4	IC205	H-1
CN103	E-7	IC206	G-1
CN201	G-5	IC207	F-1
CN202	G-5	IC208	F-3
CN203	H-6	IC209	G-3
		IC210	G-3
D1	A-22	IC211	F-4
		IC212	F-9
E1	A-14	IC213	G-7
E2	J-14	IC216	G-10
E3	E-12	IC217	H-8
E4	C-4	IC218	F-12
E5	G-4	IC220	J-12
		IC222	G-12
F1	A-22	IC223	H-7
		IC224	J-9
IC2	A-21	IC225	J-8
IC3	A-22	IC226	H-9
IC4	A-19	IC227	H-8
IC5	A-17	IC228	F-10
IC6	B-19	IC304	H-17
IC7	D-17	IC305	H-21
IC8	B-17	IC306	G-16
IC9	D-19	IC307	F-21
IC10	C-18	IC308	E-17
IC11	A-16	IC309	E-21
IC12	B-21	IC320	H-10
IC13	B-17	IC321	C-14
IC14	A-13	IC322	H-11
IC15	B-22	IC323	E-13
IC16	D-22	IC324	F-14
IC17	C-22	IC325	G-14
IC18	C-17	IC326	J-14
IC19	D-17	IC327	C-15
IC20	F-22	IC328	H-12
IC21	F-10	IC329	D-15
IC22	A-20	IC330	H-13
IC23	D-18	IC331	D-14
IC101	E-4		
IC102	E-6	TH1	F-22
IC103	E-3		
IC104	E-3	TP1	A-16
IC105	E-1	TP2	A-16
IC106	C-1	TP3	A-15
IC107	A-1	TP4	C-20
IC108	A-3	TP5	C-20
IC109	C-3		
IC110	C-3		
IC111	A-4		
IC112	A-9		
IC113	C-7		
IC114	E-10		
IC115	E-8		
IC116	C-10		
IC117	D-8		
IC118	A-11		
IC119	E-12		
IC120	C-13		
IC121	C-12		

NOTE
- : *-A SIDE
*-(B) : *-B SIDE



MAT-2; MATTE GENERATOR BOARD

22 A-13
23 E-7
28 A-13
31 I-4
32 I-6
33 I-4
34 H-3
35 H-1
36 J-1
37 I-1
38 I-3
39 G-3
40 G-3
41 I-4
42 I-9
43 G-7
44 G-10
45 H-8
46 I-12
47 I-12
48 G-12
49 H-7
50 J-9
51 I-8
52 I-9
53 I-8
54 F-10
55 H-17
56 I-21
57 I-16
58 I-21
59 E-17
60 E-21
61 I-10
62 I-14
63 I-11
64 E-13
65 F-14
66 I-14
67 I-14
68 J-15
69 H-12
70 D-15
71 I-13
72 I-14
73 F-22
74 I-16
75 I-16
76 I-15
77 C-20
78 C-20



MAT-2 -A SIDE-
1-639-397-11
DVS-8000C

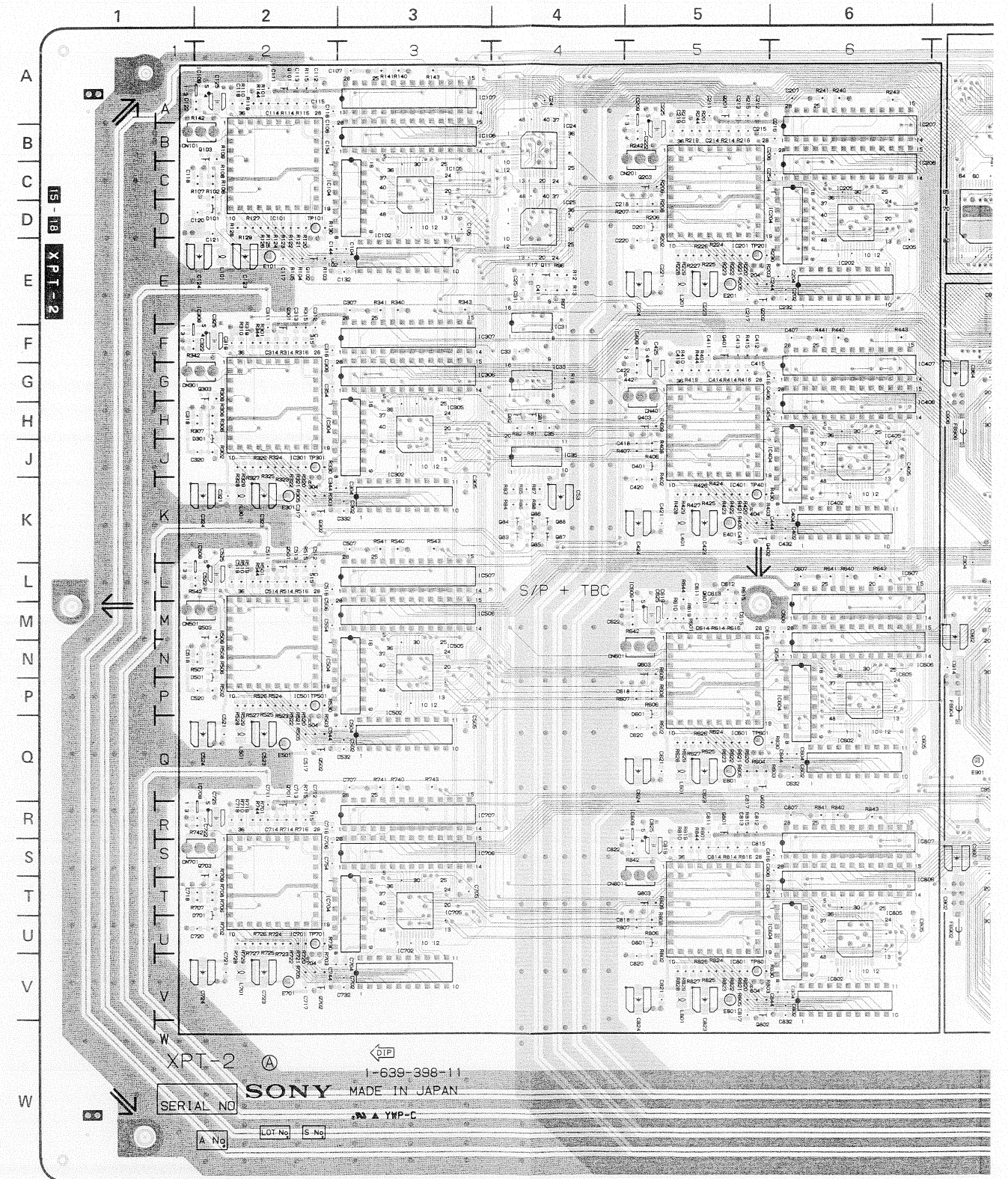
XPT-2; DIGITAL INPUT BOARD

DVS-8000C

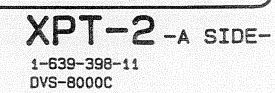
XPT-2 (1-639-398-11)

CNX1	C-12	IC204	D-6	Q201	A-5
CNY1	M-12	IC205	C-6	Q202	E-5
		IC206	C-6	Q203	C-5
CNZ1	V-12	IC207	B-6	Q301	E-2
		IC209	A-5	Q302	K-2
CN101	B-1	IC301	J-2	Q303	G-2
CN201	C-5	IC302	J-3	Q401	F-5
CN301	G-1	IC304	H-2	Q402	K-6
CN401	H-5	IC305	H-4	Q403	H-5
CN501	M-1	IC306	G-4	Q501	K-2
CN601	N-4	IC307	F-4	Q502	Q-2
CN701	S-1	IC309	E-2	Q503	M-2
CN801	T-4	IC401	K-5	Q601	L-5
		IC402	K-6	Q602	R-6
		IC404	J-6	Q603	N-5
D12	B-12	IC405	H-6	Q701	Q-2
D13	B-12	IC406	H-7	Q702	V-2
D101	D-2	IC407	G-7	Q703	S-2
D201	D-5	IC409	F-5	Q801	R-5
D301	J-2	IC501	P-2	Q802	W-6
D401	J-5	IC502	P-3	Q803	T-5
D501	N-2	IC504	N-2		
D601	Q-5	IC505	N-3	TH10	R-12
D701	U-2	IC506	L-4		
D801	V-5	IC507	L-4	TP101	D-2
		IC509	K-2	TP201	E-5
E10	A-10	IC601	Q-5	TP301	J-2
E101	E-2	IC602	Q-6	TP401	K-5
E201	E-5	IC604	P-6	TP501	P-2
E301	K-2	IC605	P-6	TP601	Q-5
E401	K-5	IC606	N-6	TP701	V-2
E501	Q-2	IC607	L-6	TP801	V-5
E601	Q-5	IC609	L-5		
E701	V-2	IC701	U-2		
E801	V-5	IC702	V-3		
E901	Q-7	IC704	T-2		
		IC705	U-3		
F1	A-12	IC706	R-4		
F2	A-12	IC707	S-4		
		IC709	Q-2		
IC10	B-10	IC801	V-5		
IC11	A-10	IC802	V-6		
IC12	A-8	IC804	U-6		
IC20	C-11	IC805	U-6		
IC21	D-10	IC806	T-7		
IC22	D-10	IC807	S-7		
IC23	D-11	IC809	R-5		
IC24	B-4	IC902	V-8		
IC25	D-4	IC903	V-10		
IC26	C-8	IC904	P-8		
IC27	R-12	IC905	P-10		
IC31	F-4	IC906	J-8		
IC32	A-9	IC907	J-10		
IC33	G-4				
IC35	J-4	Q11	E-4		
IC36	B-9	Q81	H-4		
IC37	E-7	Q82	H-4		
IC101	D-2	Q83	K-4		
IC102	D-3	Q84	K-4		
IC104	B-2	Q85	K-4		
IC105	B-3	Q86	K-4		
IC106	B-3	Q87	K-4		
IC107	A-4	Q88	K-4		
IC109	A-2	Q101	A-2		
IC201	E-5	Q102	E-2		
IC202	E-6	Q103	B-2		

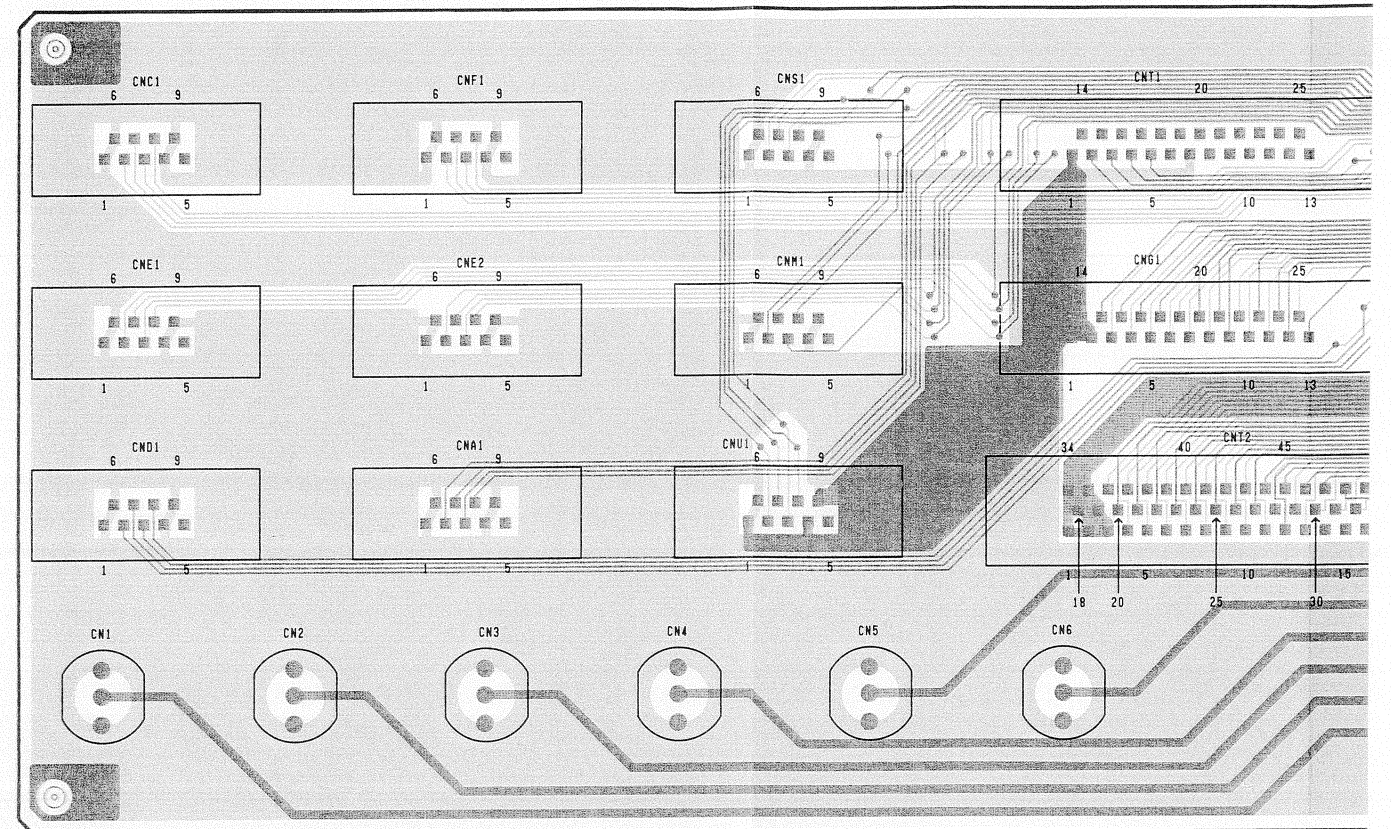
NOTE
 --* : --* A SIDE
 --*(B) : --* B SIDE



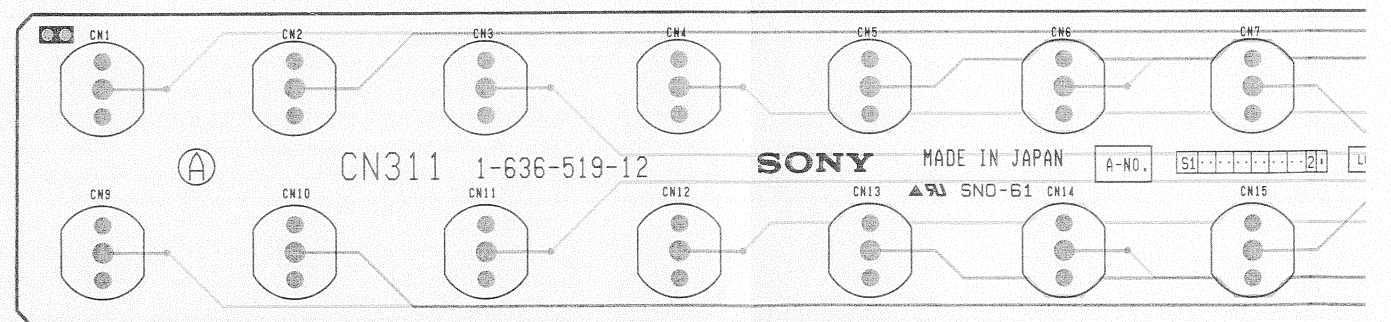
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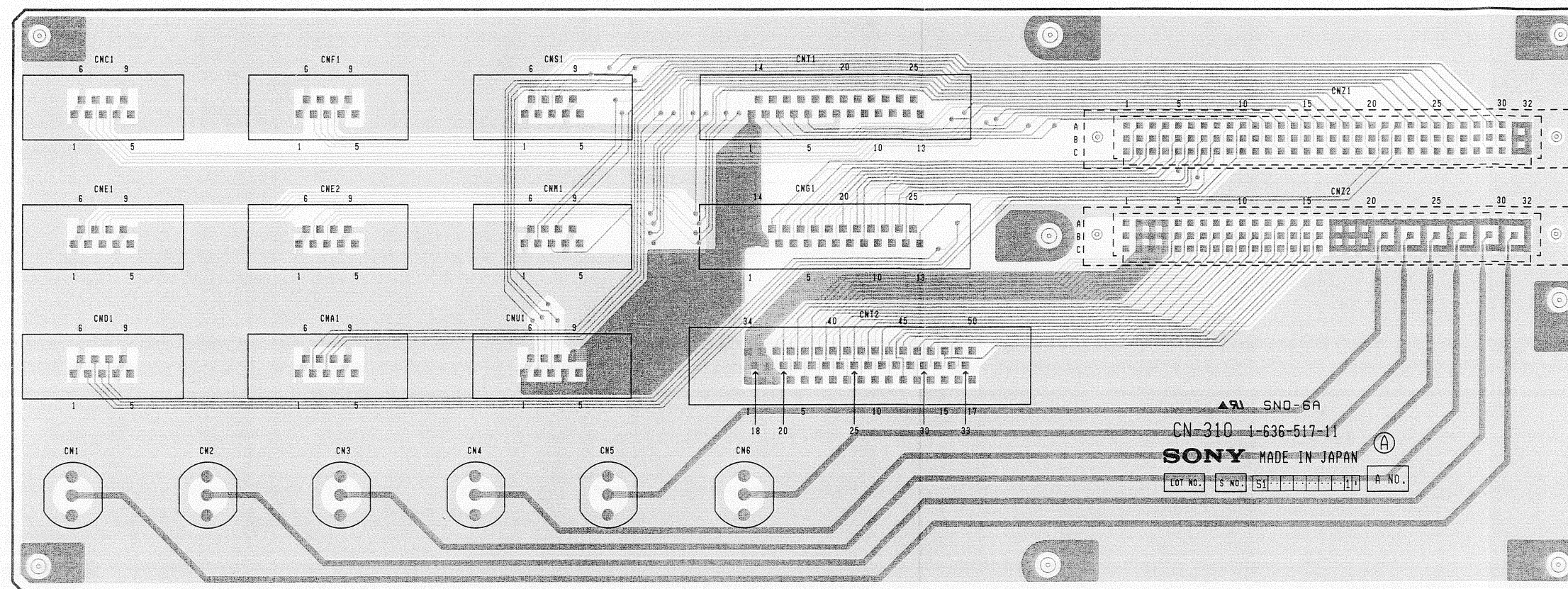
CN-310 (A) ; CONTROL CONNECTOR BOARD



CN-311; OUTPUT CONNECTOR BOARD

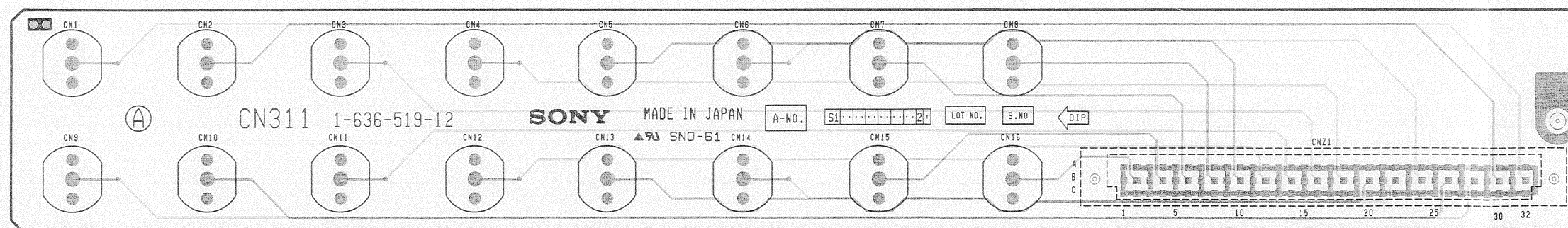


CN-310 (A) ; CONTROL CONNECTOR BOARD



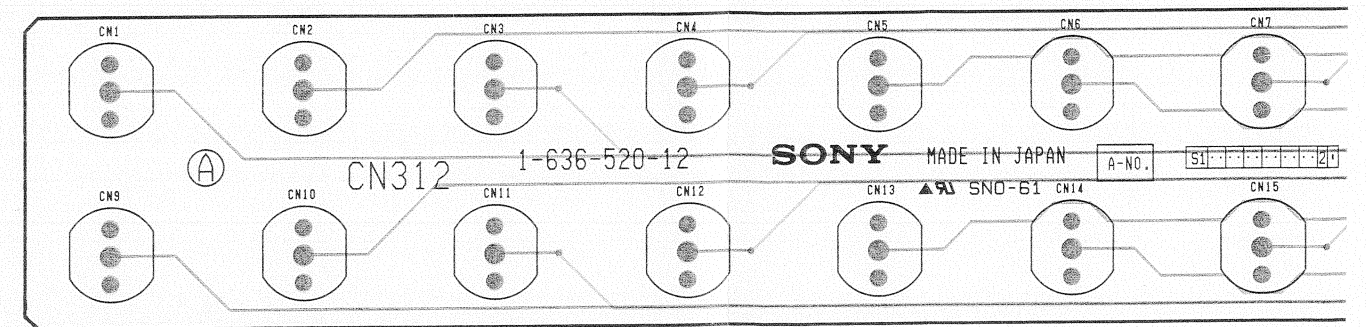
CN-310 (A) -A SIDE-
1-636-517-11
DVS-8000C

CN-311; OUTPUT CONNECTOR BOARD

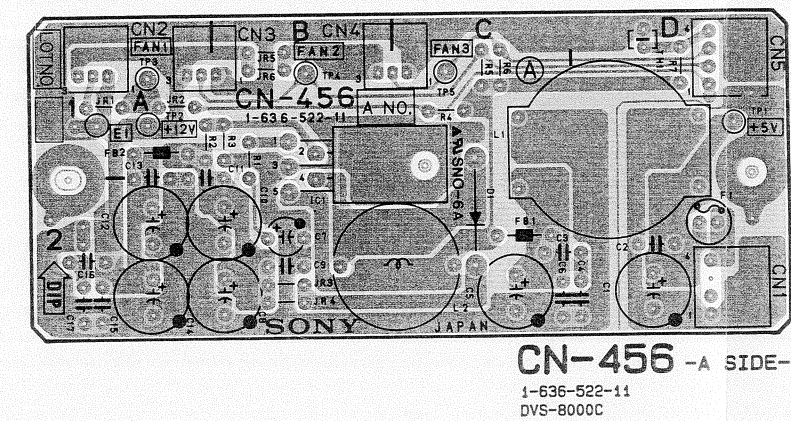


CN-311 -A SIDE-
1-636-519-12
DVS-8000C

CN-312 (A), (B); PRIMARY INPUT CONNECTOR BOARDS

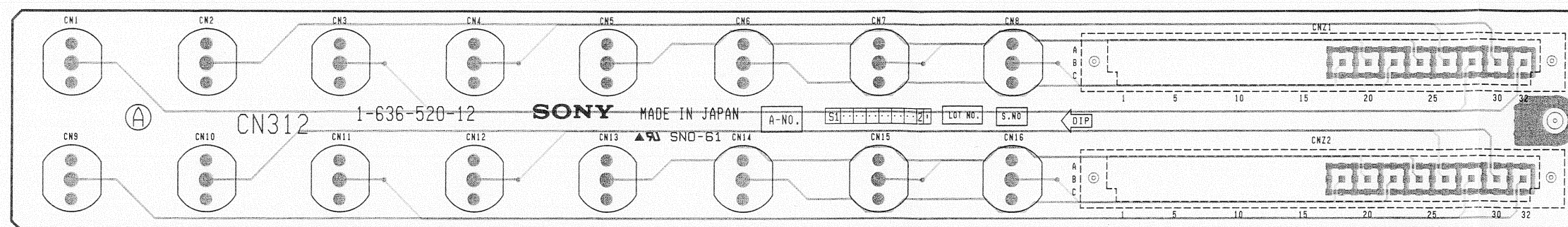


CN-456; POWER SUPPLY CONNECTOR BOARD



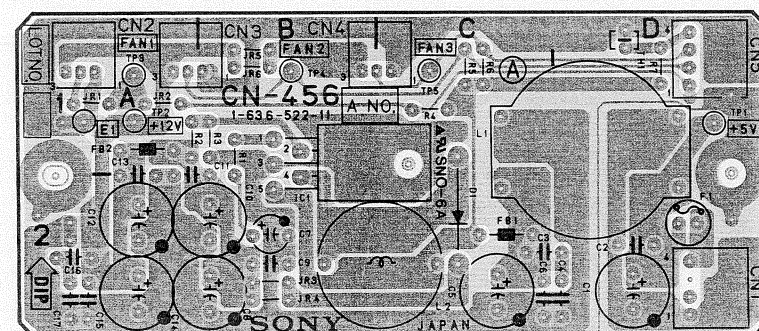
CN-456 -A SIDE-
1-636-522-11
DVS-8000C

CN-312 (A), (B); PRIMARY INPUT CONNECTOR BOARDS



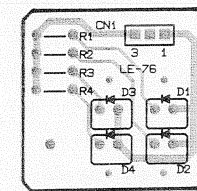
CN-312 -A SIDE-
1-636-520-12
DVS-8000C

CN-456; POWER SUPPLY CONNECTOR BOARD

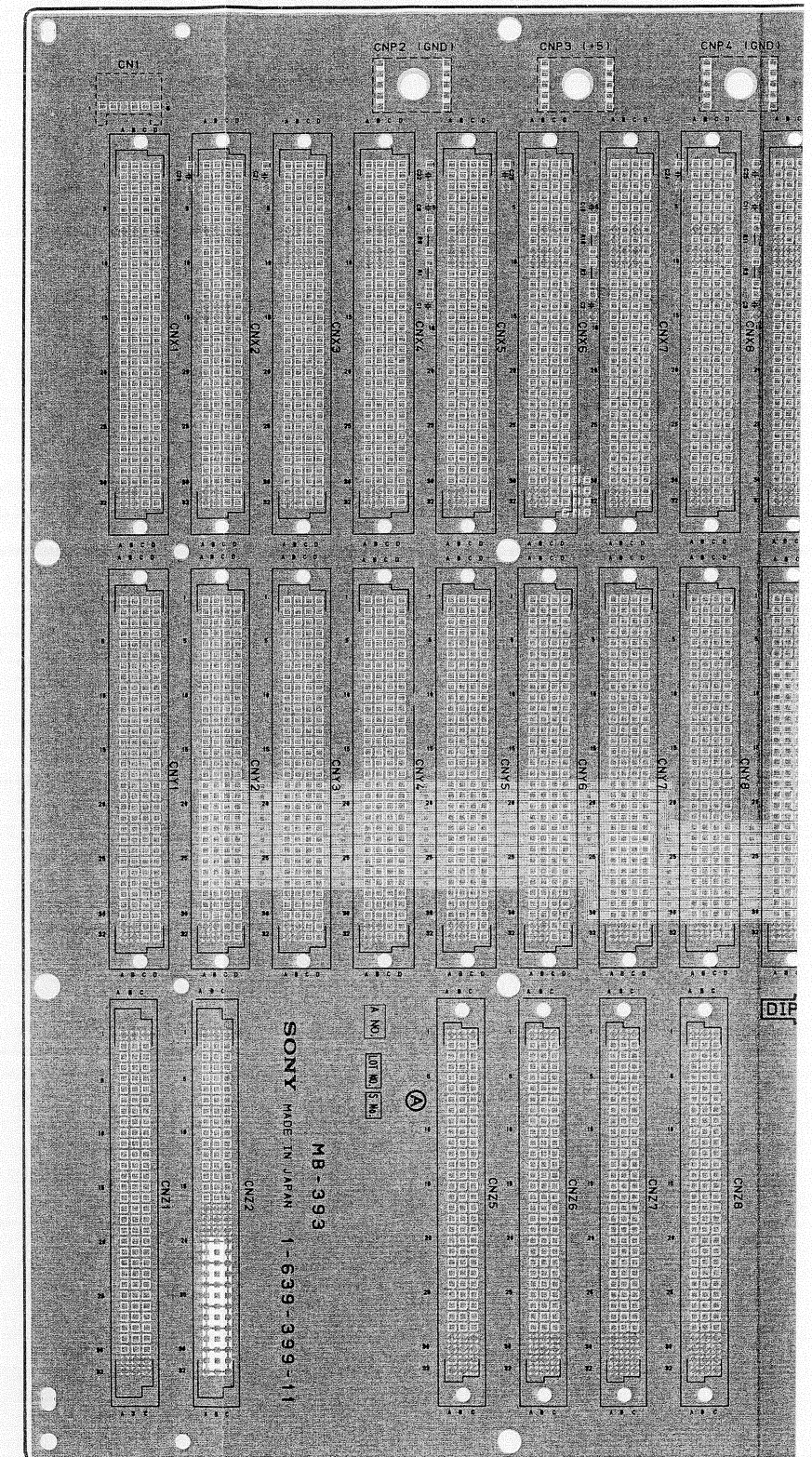


CN-456 -A SIDE-
1-636-522-11
DVS-8000C

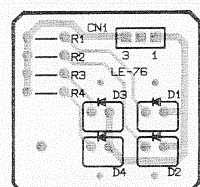
MB-393; MOTHER BOARD
LE-76; POWER LED BOARD



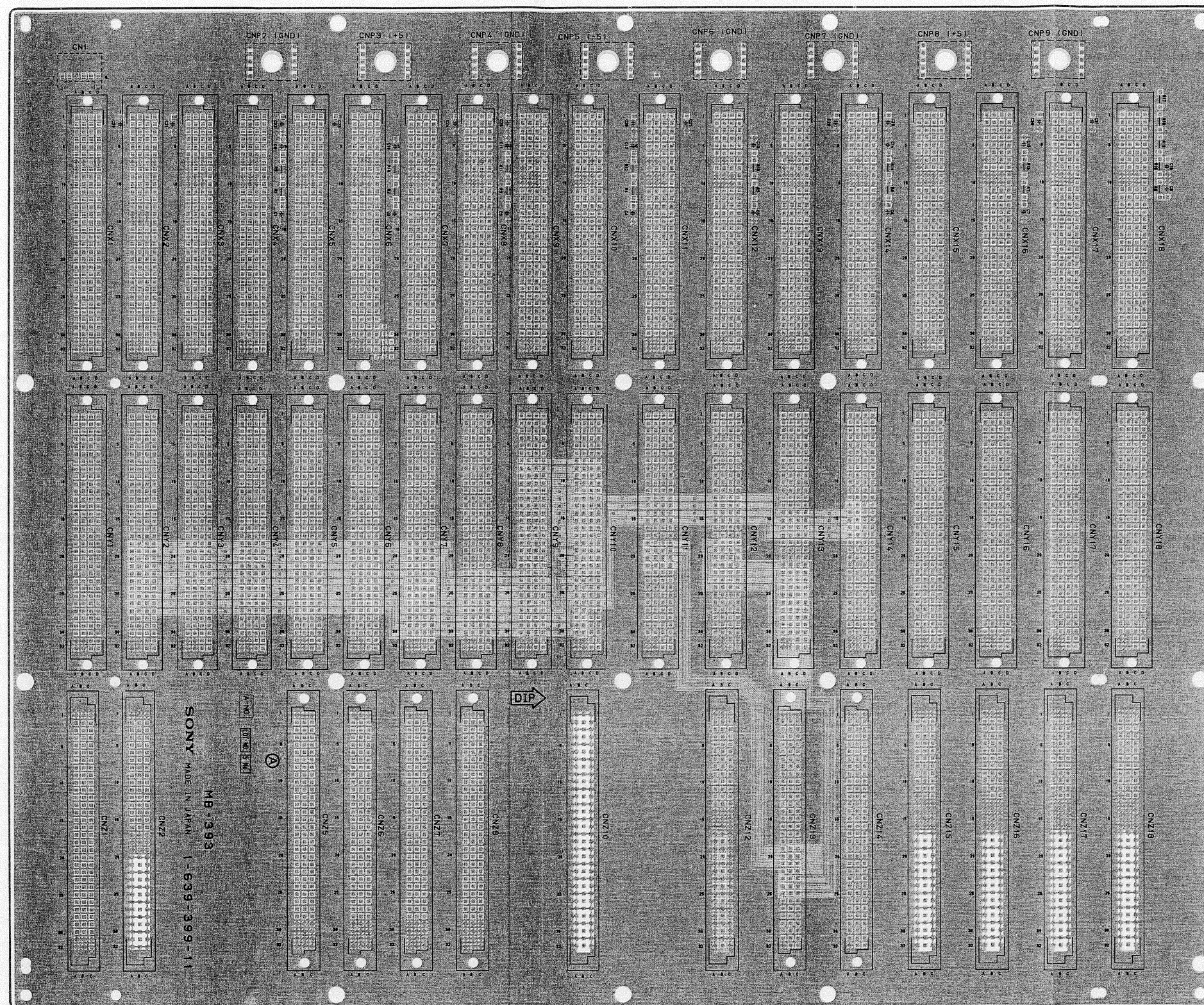
LE-76
-COMPONENT SIDE-
1-631-489-11
DVS-8000C



MB-393; MOTHER BOARD
LE-76; POWER LED BOARD

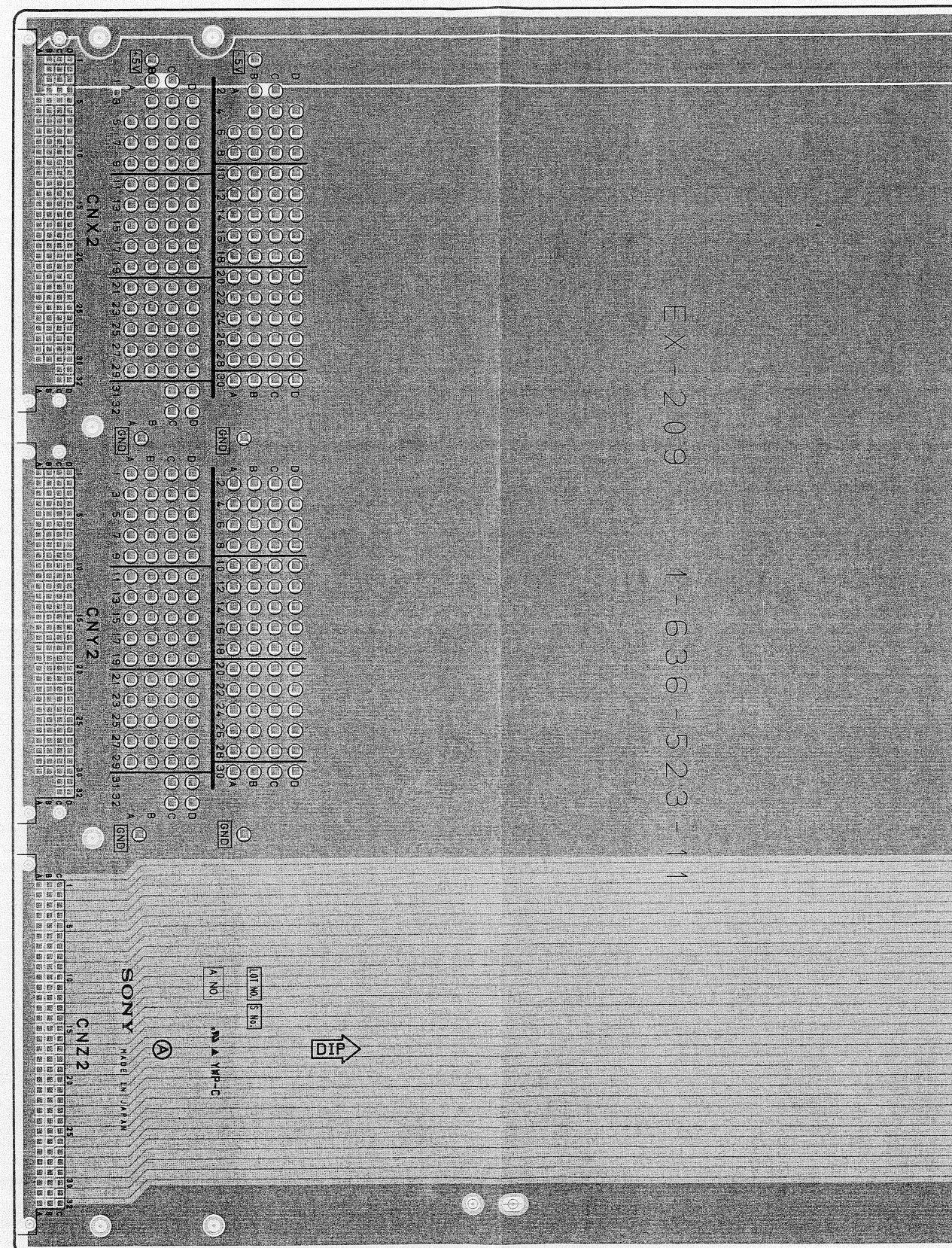


LE-76
-COMPONENT SIDE-
1-631-489-11
DVS-8000C

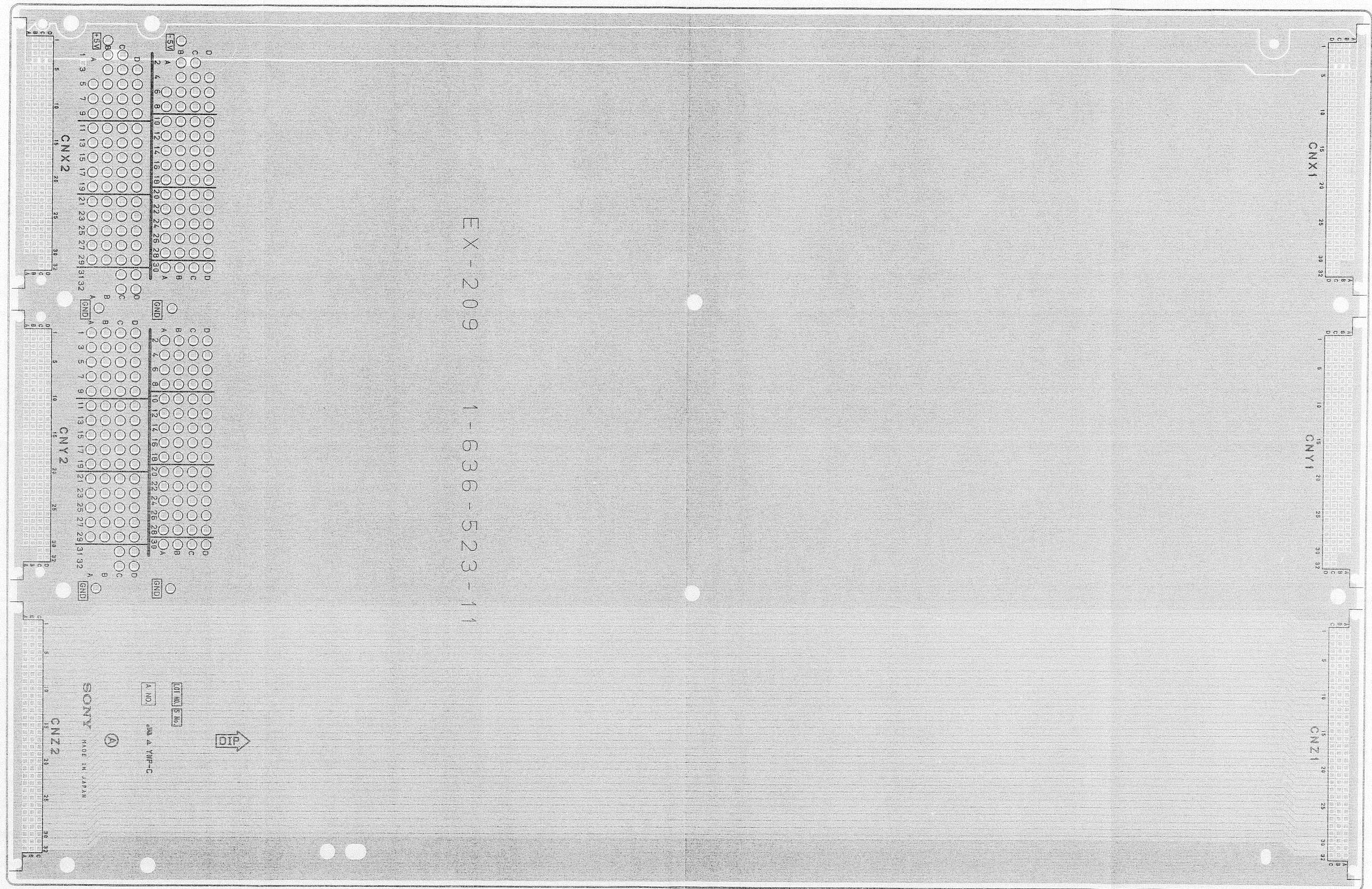


MB-393 -A SIDE-
1-639-339-11
DVS-8000C

EX-209; EXTENSION BOARD



EX-209; EXTENSION BOARD




EX-209 -A SIDE-
1-636-523-11
DVS-8000C

SECTION 11

SPARE PARTS AND ACCESSORIES

11-1. PARTS INFORMATION

- (1) The shaded and  -marked components are critical to safety.
Replace only with the same components as specified.
- (2) Replacement parts supplied from the Sony Parts Center will sometimes have a different shape and outside view from the parts which are used in the unit. This is due to "accommodating improved parts and/or engineering changes" or "standardization of genuine parts".
 - This manual's exploded views and electrical spare parts lists indicate the part numbers of "the present standardized genuine parts".
 - Regarding engineering part changes by our engineering department, refer to Sony service bulletins and service manual supplements.
- (3) The parts marked with "s" in the SP column of the exploded views and electrical spare parts lists are normally stocked for replacement purposes. The parts marked with "o" in the SP column are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.
- (4) Items with no part number and/or no description are not stocked because they are seldom required for routine service.

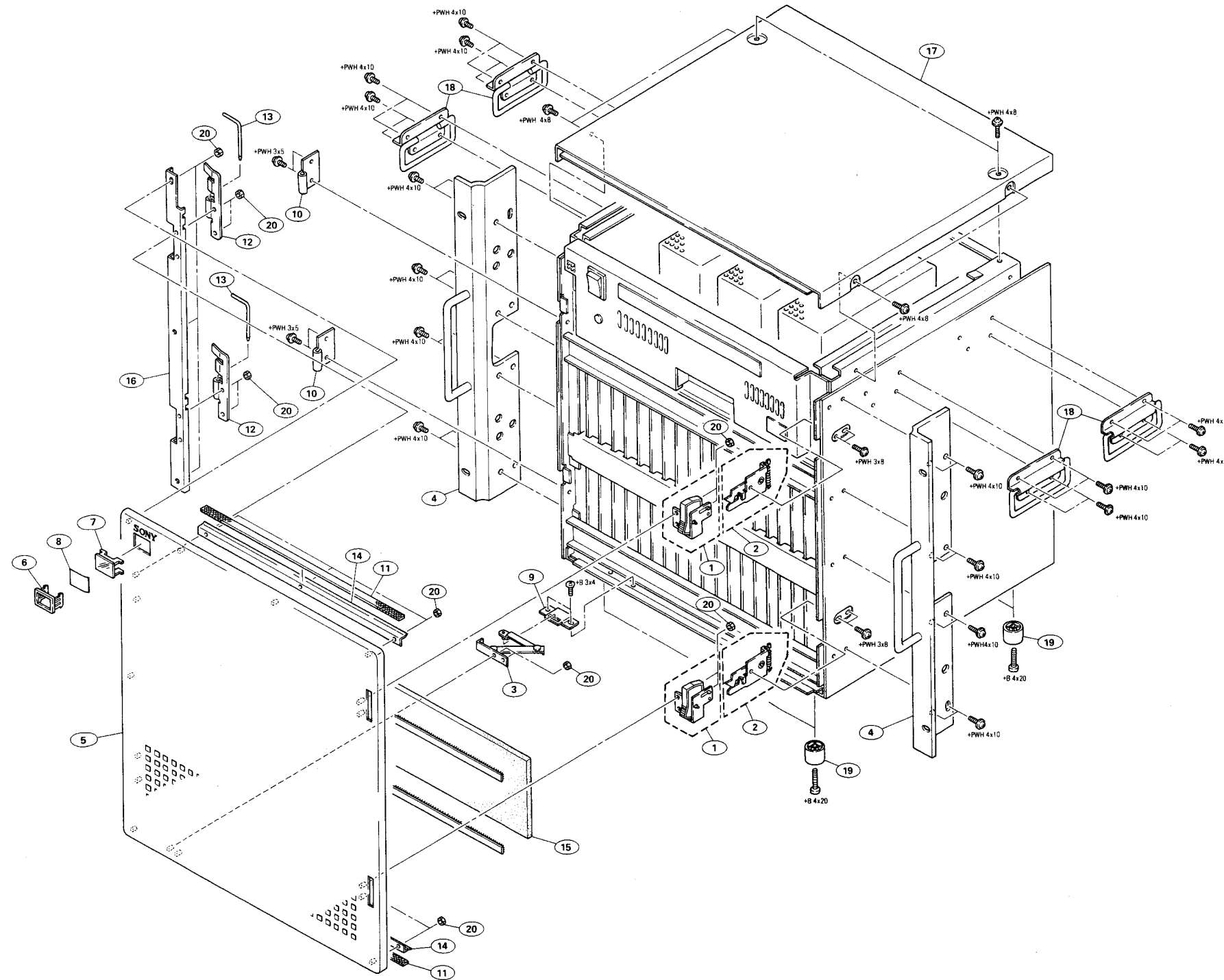
11-2. EXPLODED VIEW

- Exploded views are composed of the following blocks

- (1) Chassis 1
- (2) Chassis 2
- (3) Power Unit
- (4) Rear Panel

CHASSIS 1 CHASSIS 1

CHASSIS 1

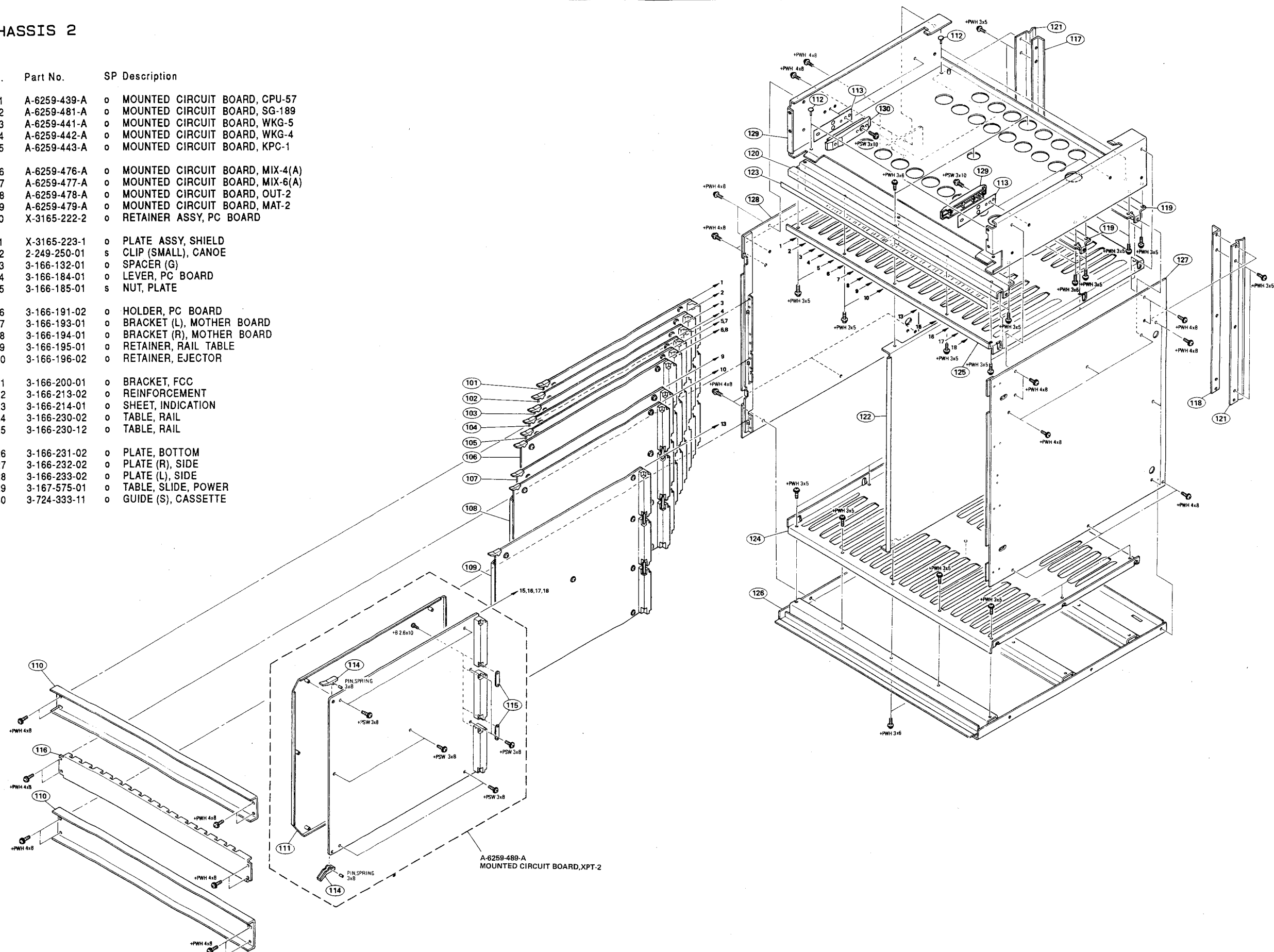


No.	Part No.	SP Description
1	A-6279-484-C	o HANDLE ASSY, DOOR
2	X-2127-216-2	o LOCK ASSY, DOOR
3	X-3165-067-1	o STOPPER ASSY
4	X-3165-221-1	o ANGLE ASSY (10U), RACK
5	X-3165-714-1	o PANEL ASSY, FRONT
6	2-139-192-01	o FRAME, INDICATOR WINDOW
7	2-139-193-01	o WINDOW, INDICATOR
8	2-249-353-00	o COVER, LAMP
9	3-166-131-01	o TABLE (H), STAY
10	3-166-133-01	o HINGE (H)
11	3-166-134-01	o LINE, SHIELD
12	3-166-135-01	o HINGE (F)
13	3-166-136-01	o PIN, HINGE
14	3-166-157-01	o BRACKET, SHIELD LINE
15	3-166-203-02	o FILTER
16	3-166-223-01	o PLATE, SIDE, LEFT, PANEL
17	3-166-229-01	o PLATE, TOP
18	3-167-453-01	o HANDLE
19	3-642-656-01	s FOOT
20	4-334-513-00	s NUT, NYLON

CHASSIS 2 CHASSIS 2

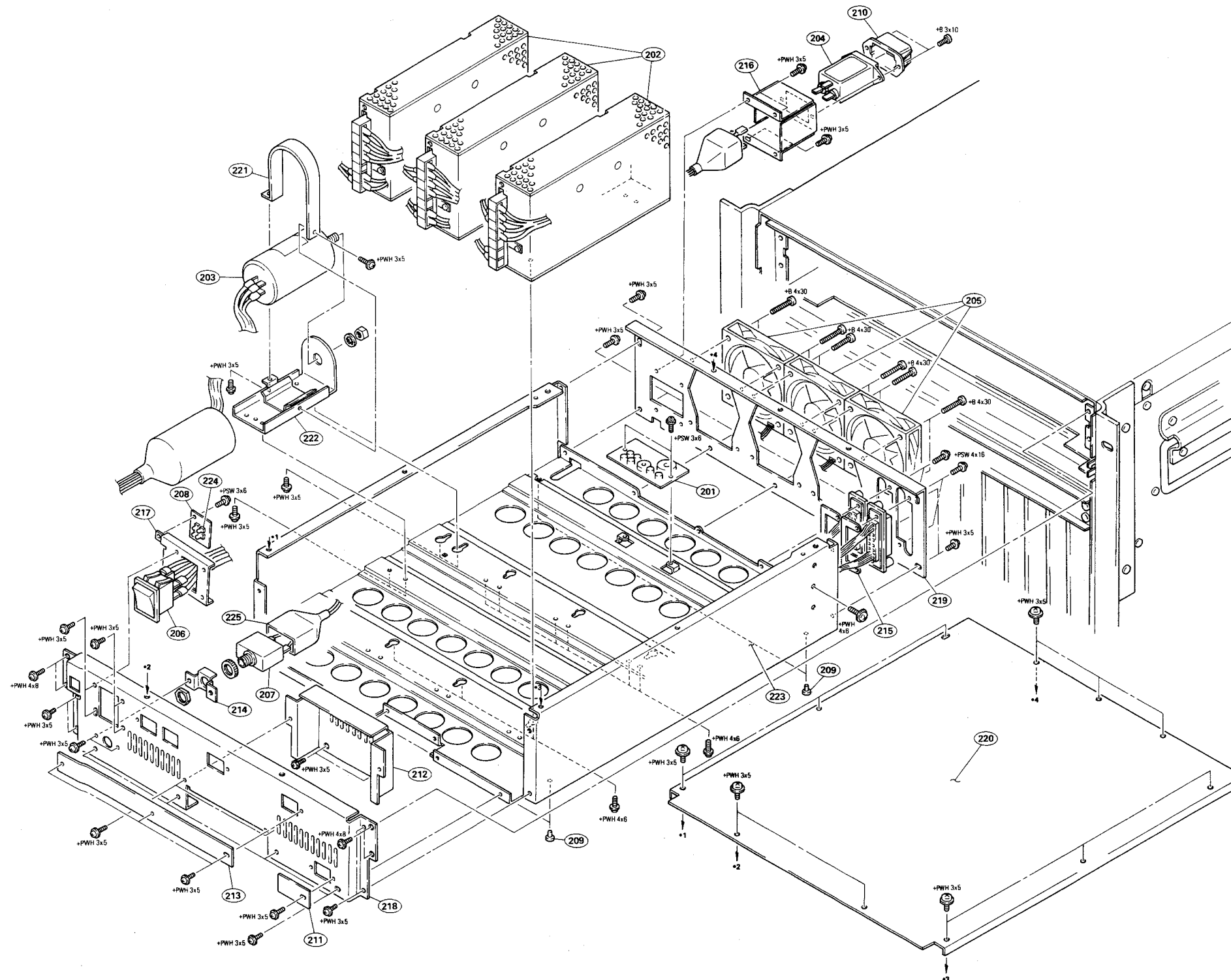
CHASSIS 2

No.	Part No.	SP	Description
101	A-6259-439-A	o	MOUNTED CIRCUIT BOARD, CPU-57
102	A-6259-481-A	o	MOUNTED CIRCUIT BOARD, SG-189
103	A-6259-441-A	o	MOUNTED CIRCUIT BOARD, WKG-5
104	A-6259-442-A	o	MOUNTED CIRCUIT BOARD, WKG-4
105	A-6259-443-A	o	MOUNTED CIRCUIT BOARD, KPC-1
106	A-6259-476-A	o	MOUNTED CIRCUIT BOARD, MIX-4(A)
107	A-6259-477-A	o	MOUNTED CIRCUIT BOARD, MIX-6(A)
108	A-6259-478-A	o	MOUNTED CIRCUIT BOARD, OUT-2
109	A-6259-479-A	o	MOUNTED CIRCUIT BOARD, MAT-2
110	X-3165-222-2	o	RETAINER ASSY, PC BOARD
111	X-3165-223-1	o	PLATE ASSY, SHIELD
112	2-249-250-01	s	CLIP (SMALL), CANOE
113	3-166-132-01	o	SPACER (G)
114	3-166-184-01	o	LEVER, PC BOARD
115	3-166-185-01	s	NUT, PLATE
116	3-166-191-02	o	HOLDER, PC BOARD
117	3-166-193-01	o	BRACKET (L), MOTHER BOARD
118	3-166-194-01	o	BRACKET (R), MOTHER BOARD
119	3-166-195-01	o	RETAINER, RAIL TABLE
120	3-166-196-02	o	RETAINER, EJECTOR
121	3-166-200-01	o	BRACKET, FCC
122	3-166-213-02	o	REINFORCEMENT
123	3-166-214-01	o	SHEET, INDICATION
124	3-166-230-02	o	TABLE, RAIL
125	3-166-230-12	o	TABLE, RAIL
126	3-166-231-02	o	PLATE, BOTTOM
127	3-166-232-02	o	PLATE (R), SIDE
128	3-166-233-02	o	PLATE (L), SIDE
129	3-167-575-01	o	TABLE, SLIDE, POWER
130	3-724-333-11	o	GUIDE (S), CASSETTE



POWER UNIT	POWER UNIT
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POWER UNIT (=BKDS-8090)



No.	Part No.	SP	Description
201	A-6263-090-A	o	MOUNTED CIRCUIT BOARD, CN-456
202	△ 1-413-414-13	s	SWITCHING REGULATOR
203	△ 1-424-136-11	s	FILTER, NOISE
204	△ 1-526-813-12	s	INLET, AC 3P, MALE
205	1-541-329-31	s	FAN, DC (WITH ALARM)
206	△ 1-572-345-11	s	SWITCH, ROCKER (AC POWER)
207	△ 1-576-036-11	s	BREAKER, CIRCUIT, 6A 250V
208	1-631-489-11	o	PC BOARD, LE-76
209	2-249-250-01	s	CLIP (SMALL), CANOE
210	2-990-241-01	o	HOLDER (A), PLUG
211	3-166-137-01	o	COVER, ADJUSTMENT WINDOW
212	3-166-160-01	o	COVER, HANDLE
213	3-166-188-02	o	COVER (2), ADJUSTMENT WINDOW
214	3-166-189-02	o	BRACKET, BREAKER
215	3-166-190-11	s	NUT, PLATE
216	3-166-206-02	o	BRACKET, AC INLET
217	3-166-207-01	o	BRACKET, AC SW
218	3-166-224-03	o	PANEL, FRONT, POWER
219	3-166-225-02	o	PANEL, REAR, POWER
220	3-166-305-02	o	PLATE, TOP (BKDS-8090 ONLY)
221	3-167-572-01	o	BRACKET (2), FILTER
222	3-167-573-01	o	BRACKET (1), FILTER
223	3-167-574-01	o	CHASSIS, POWER
224	3-674-390-02	o	HOLDER (B), LED
225	3-723-892-01	o	COVER, CIRCUIT BREAKER

This diagram illustrates the exploded view of a mechanical assembly, showing various components and their assembly points. The parts are numbered as follows:

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No.	Part No.	SP	Description
301	A-6259-482-A	o	MOUNTED CIRCUIT BOARD, CN-310(A)
302	A-6259-435-A	o	MOUNTED CIRCUIT BOARD, CN-311
303	A-6259-436-A	o	MOUNTED CIRCUIT BOARD, CN-312 (A)
304	A-6259-437-A	o	MOUNTED CIRCUIT BOARD, CN-312 (B)
305	A-6279-848-A	o	MB-393 ASSY
306	X-2068-004-1	s	TERMINAL ASSY
307	1-563-890-21	s	SOCKET, D-SUB CONNECTOR 9P
308	1-563-891-21	s	SOCKET, D-SUB CONNECTOR 25P
309	1-563-893-21	s	SOCKET, D-SUB CONNECTOR 50P
310	1-580-356-11	s	CONNECTOR BNC
311	2-068-008-00	s	WASHER
312	2-270-616-00	o	HANDLE
313	3-166-187-01	o	SPACER
314	3-166-197-01	o	VENTILATOR
315	3-166-198-02	o	PANEL, BLANK
316	3-166-199-03	o	BRACKET, CN, DRAWER
317	3-169-259-01	o	PANEL, BNC
318	3-166-208-02	o	REINFORCEMENT (1), MOTHER BOARD
319	3-166-209-01	o	REINFORCEMENT (2), MOTHER BOARD
320	3-166-210-02	o	REINFORCEMENT (3), MOTHER BOARD

POWER

(1), MOTHER BOARD
(2), MOTHER BOARD
(3), MOTHER BOARD

The diagram illustrates the assembly of a power supply unit, showing three motherboards (1, 2, 3) and their associated components. The components are labeled as follows:

- 310: Motherboard 1
- 311: Motherboard 2
- 312: Motherboard 3
- 313: Motherboard 4
- 314: Motherboard 5
- 315: Motherboard 6
- 316: Motherboard 7
- 317: Motherboard 8
- 318: Motherboard 9
- 319: Motherboard 10
- 320: Motherboard 11
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- 403: Motherboard 94
- 404: Motherboard 95
- 405: Motherboard 96
- 406: Motherboard 97
- 407: Motherboard 98
- 408: Motherboard 99
- 409: Motherboard 100

The diagram also shows various screws and brackets used in the assembly, labeled with dimensions and quantities:

- +PSW 3x6
- +PSW 3x5
- +PSW 3x4
- +PSW 3x3
- +PSW 3x2
- +PSW 3x1
- +PSW 3x0
- +PSW 3x-1
- +PSW 3x-2
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11-3. ELECTRICAL PARTS LIST

ABBREVIATIONS

Ref. No.	Description
C□□, CT□□	CAPACITOR
CF□□	CERAMIC FILTER
CN□□	CONNECTOR
D□□	DIODE
DL□□	DELAY LINE
F□□	FUSE
FB□□	FERRITE BEAD
FL□□	FILTER
H□□	HEAD

Ref. No.	Description
IC□□	IC
J□□	JACK
L□□	INDUCTOR
M□□	MOTOR
ME□□	METER
MIC□□	MICROPHONE
PG□□	PG COIL
PL□□	LAMP
PM□□	SOLENOIDE

Ref. No.	Description
Q□□	TRANSISTOR
R□□, RV□□	RESISTOR
RV□□	RELAY
S□□, SW□□	SWITCH
SB□□	SOLAR BATTERY
T□□	TRANSFORMER
TH□□	THERMISTOR
X□□	CRYSTAL

All capacitors are in micro farads unless otherwise specified.

All inductors are in micro henries unless otherwise specified.

All resistors are in ohms.

CAPACITOR, CERAMIC, STACKED

Part No. SP Description

1-162-757-11	s CAP, CERAMIC	220pF	5% 50V
1-162-762-11	s CAP, CERAMIC	560pF	5% 50V
1-162-764-11	s CAP, CERAMIC	820pF	5% 50V
1-162-765-11	s CAP, CERAMIC	0.001	5% 50V
1-162-769-11	s CAP, CERAMIC	0.0022	5% 50V
1-162-777-11	s CAP, CERAMIC	0.01	5% 50V
1-162-781-11	s CAP, CERAMIC	0.022	5% 50V
1-162-788-11	s CAP, CERAMIC	0.0033	10% 50V
1-162-790-11	s CAP, CERAMIC	0.0047	10% 50V
1-162-806-11	s CAP, CERAMIC	0.1	10% 50V
1-162-810-11	s CAP, CERAMIC	0.22	10% 50V
1-162-812-11	s CAP, CERAMIC	0.33	10% 50V
1-161-883-11	s CAP, CERAMIC	0.0015	50V
1-161-884-11	s CAP, CERAMIC	0.0022	50V
1-161-885-11	s CAP, CERAMIC	0.0033	50V
1-161-886-11	s CAP, CERAMIC	0.0047	50V
1-161-887-11	s CAP, CERAMIC	0.0068	50V
1-161-888-11	s CAP, CERAMIC	0.01	50V
1-161-889-11	s CAP, CERAMIC	0.015	50V
1-161-890-11	s CAP, CERAMIC	0.022	50V
1-161-891-11	s CAP, CERAMIC	0.033	50V
1-161-892-11	s CAP, CERAMIC	0.047	50V
1-161-893-11	s CAP, CERAMIC	0.068	50V
1-161-485-00	s CAP, CERAMIC	0.1	50V
1-161-895-11	s CAP, CERAMIC	0.15	50V
1-161-896-11	s CAP, CERAMIC	0.22	50V
1-161-897-11	s CAP, CERAMIC	0.33	50V
1-161-898-11	s CAP, CERAMIC	0.47	50V
1-161-899-11	s CAP, CERAMIC	0.68	50V
1-161-900-11	s CAP, CERAMIC	1.0	50V

RESISTOR, CHIP METAL

Part No. SP Description

1-216-603-11	s RES, CHIP METAL	10	1% 1/10W
1-216-605-11	s RES, CHIP METAL	12	1% 1/10W
1-216-609-11	s RES, CHIP METAL	18	1% 1/10W
1-216-611-11	s RES, CHIP METAL	22	1% 1/10W
1-216-614-11	s RES, CHIP METAL	30	1% 1/10W
1-216-617-11	s RES, CHIP METAL	39	1% 1/10W
1-216-619-11	s RES, CHIP METAL	47	1% 1/10W
1-216-620-11	s RES, CHIP METAL	51	1% 1/10W
1-216-623-11	s RES, CHIP METAL	68	1% 1/10W
1-216-624-11	s RES, CHIP METAL	75	1% 1/10W
1-216-625-11	s RES, CHIP METAL	82	1% 1/10W
1-216-626-11	s RES, CHIP METAL	91	1% 1/10W
1-216-627-11	s RES, CHIP METAL	100	1% 1/10W
1-216-629-11	s RES, CHIP METAL	120	1% 1/10W
1-216-631-11	s RES, CHIP METAL	150	1% 1/10W
1-216-633-11	s RES, CHIP METAL	180	1% 1/10W
1-216-634-11	s RES, CHIP METAL	200	1% 1/10W
1-216-635-11	s RES, CHIP METAL	220	1% 1/10W
1-216-636-11	s RES, CHIP METAL	240	1% 1/10W
1-216-637-11	s RES, CHIP METAL	270	1% 1/10W
1-216-638-11	s RES, CHIP METAL	300	1% 1/10W
1-216-639-11	s RES, CHIP METAL	330	1% 1/10W
1-216-640-11	s RES, CHIP METAL	360	1% 1/10W
1-216-641-11	s RES, CHIP METAL	390	1% 1/10W
1-216-642-11	s RES, CHIP METAL	430	1% 1/10W
1-216-643-11	s RES, CHIP METAL	470	1% 1/10W
1-216-644-11	s RES, CHIP METAL	510	1% 1/10W
1-216-645-11	s RES, CHIP METAL	560	1% 1/10W
1-216-647-11	s RES, CHIP METAL	680	1% 1/10W
1-216-648-11	s RES, CHIP METAL	750	1% 1/10W
1-216-649-11	s RES, CHIP METAL	820	1% 1/10W
1-216-650-11	s RES, CHIP METAL	910	1% 1/10W
1-216-651-11	s RES, CHIP METAL	1.0k	1% 1/10W
1-216-652-11	s RES, CHIP METAL	1.1k	1% 1/10W
1-216-653-11	s RES, CHIP METAL	1.2k	1% 1/10W
1-216-655-11	s RES, CHIP METAL	1.5k	1% 1/10W
1-216-656-11	s RES, CHIP METAL	1.6k	1% 1/10W
1-216-657-11	s RES, CHIP METAL	1.8k	1% 1/10W
1-216-658-11	s RES, CHIP METAL	2k	1% 1/10W
1-216-659-11	s RES, CHIP METAL	2.2k	1% 1/10W
1-216-660-11	s RES, CHIP METAL	2.4k	1% 1/10W
1-216-661-11	s RES, CHIP METAL	2.7k	1% 1/10W
1-216-662-11	s RES, CHIP METAL	3k	1% 1/10W
1-216-663-11	s RES, CHIP METAL	3.3k	1% 1/10W
1-216-664-11	s RES, CHIP METAL	3.5k	1% 1/10W
1-216-665-11	s RES, CHIP METAL	3.9k	1% 1/10W
1-216-666-11	s RES, CHIP METAL	4.3k	1% 1/10W
1-216-667-11	s RES, CHIP METAL	4.7k	1% 1/10W
1-216-668-11	s RES, CHIP METAL	5.1k	1% 1/10W
1-216-669-11	s RES, CHIP METAL	5.6k	1% 1/10W
1-216-670-11	s RES, CHIP METAL	6.2k	1% 1/10W
1-216-671-11	s RES, CHIP METAL	6.8k	1% 1/10W
1-216-672-11	s RES, CHIP METAL	7.5k	1% 1/10W
1-216-673-11	s RES, CHIP METAL	8.2k	1% 1/10W
1-216-674-11	s RES, CHIP METAL	9.1k	1% 1/10W
1-216-675-11	s RES, CHIP METAL	10k	1% 1/10W
1-216-676-11	s RES, CHIP METAL	11k	1% 1/10W
1-216-677-11	s RES, CHIP METAL	12k	1% 1/10W
1-216-678-11	s RES, CHIP METAL	13k	1% 1/10W
1-216-679-11	s RES, CHIP METAL	15k	1% 1/10W

(RESISTOR, CHIP METAL)

Part No. SP Description

1-216-680-11	s	RES, CHIP METAL	16k	1%	1/10W
1-216-681-11	s	RES, CHIP METAL	18k	1%	1/10W
1-216-682-11	s	RES, CHIP METAL	20k	1%	1/10W
1-216-683-11	s	RES, CHIP METAL	22k	1%	1/10W
1-216-684-11	s	RES, CHIP METAL	24k	1%	1/10W

1-216-685-11	s	RES, CHIP METAL	27k	1%	1/10W
1-216-686-11	s	RES, CHIP METAL	30k	1%	1/10W
1-216-687-11	s	RES, CHIP METAL	33k	1%	1/10W
1-216-688-11	s	RES, CHIP METAL	36k	1%	1/10W
1-216-689-11	s	RES, CHIP METAL	39k	1%	1/10W

1-216-690-11	s	RES, CHIP METAL	43k	1%	1/10W
1-216-691-11	s	RES, CHIP METAL	49k	1%	1/10W
1-216-692-11	s	RES, CHIP METAL	51k	1%	1/10W
1-216-693-11	s	RES, CHIP METAL	56k	1%	1/10W
1-216-694-11	s	RES, CHIP METAL	62k	1%	1/10W

1-216-695-11	s	RES, CHIP METAL	68k	1%	1/10W
1-216-696-11	s	RES, CHIP METAL	75k	1%	1/10W
1-216-697-11	s	RES, CHIP METAL	82k	1%	1/10W
1-216-698-11	s	RES, CHIP METAL	91k	1%	1/10W
1-216-699-11	s	RES, CHIP METAL	100k	1%	1/10W

CPU-57 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-439-A	o MOUNTED CIRCUIT BOARD, CPU-57
2pcs	3-166-184-01	o LEVER, PC BOARD
2pcs	3-166-185-01	s NUT, PLATE
6pcs	7-621-773-87	s SCREW +B 2.6X10
2pcs	7-622-207-05	s N 2.6, TYPE 2
2pcs	7-626-320-11	s PIN, SPRING 3X8
8pcs	7-682-948-01	s SCREW +PSW 3X8
BT1	1-528-180-11	s BATTERY, NICKEL CADMIUM
C1,2	1-126-396-11	s ELECT, CHIP 47uF 20% 16V
C3-13	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C14-21	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C22-25	1-163-235-11	s CERAMIC 22pF 5% 50V
C27	1-163-009-11	s CERAMIC, CHIP 0.001uF 10% 50V
C28	1-163-251-11	s CERAMIC 100pF 5% 50V
C29-34	1-163-235-11	s CERAMIC 22pF 5% 50V
C35-41	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C42-165	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
CN1	1-564-133-11	o CONNECTOR, RIBBON CABLE 20P
CN2	1-506-484-11	s CONNECTOR, 5P, MALE
CNI2	1-526-996-11	s SOCKET, IC (PGA TYPE) 68P
CNI12	1-526-816-21	o SOCKET, IC (DP) 24P
CNI15	1-526-816-21	o SOCKET, IC (DP) 24P
CNI28	1-526-660-21	s SOCKET, IC (DP) 32P
CNI29	1-526-660-21	s SOCKET, IC (DP) 32P
CNI30	1-526-659-00	o SOCKET, IC (DP) 28P
CNX1	1-565-207-21	s CONNECTOR, DIN 128P, MALE
CNY1	1-565-207-21	s CONNECTOR, DIN 128P, MALE
CNZ1	1-506-748-11	s CONNECTOR, DIN 96P, MALE
COR1-8	1-566-388-11	s CONNECTOR, 8P, MALE
D1-4	8-719-400-35	s LED LN35BP, GRN
D5	8-719-800-60	s LED TLR214, RED
D6	8-719-981-00	s DIODE ERC81-004
D7	8-719-400-35	s LED LN35BP, GRN
D8-26	8-719-800-76	s DIODE 1SS226
D27-36	8-719-400-35	s LED LN35BP, GRN
F1,2	A1-576-031-11	s FUSE, MICRO 10A
IC1	8-759-039-06	s IC MC68020RC33
IC2	8-759-039-07	s IC MC68882RC33
IC3	8-759-505-28	s IC MAX691CPE
IC4	8-759-927-46	s IC SN74HC00ANS
IC5	8-759-243-09	s IC TC74AC74F
IC7	8-759-243-39	s IC TC74AC00F
IC8	8-759-992-03	s IC 74F38SJ
IC9	8-759-243-62	s IC TC74AC32F
IC10	8-759-926-74	s IC SN74HC393ANS
IC11	8-759-243-06	s IC TC74AC04F
IC17	8-759-244-75	s IC TC74AC541F
IC18	8-759-244-75	s IC TC74AC541F
IC19	8-759-244-24	s IC TC74AC245P
IC20	8-759-244-24	s IC TC74AC245P
IC21	8-759-244-75	s IC TC74AC541F
IC22	8-759-244-75	s IC TC74AC541F

(CPU-57 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC23	8-759-244-75	s IC TC74AC541F
IC24	8-759-244-25	s IC TC74AC245F
IC25	8-759-244-25	s IC TC74AC245F
IC26	8-759-244-25	s IC TC74AC245F
IC27	8-759-244-25	s IC TC74AC245F
IC28	8-759-704-69	s IC 27C2001D-CPU E-V1.0
IC29	8-759-704-70	s IC 27C2001D-CPU 0-V1.0
IC30	8-759-748-05	s IC UPD28C64C-20
IC32-35	8-759-243-74	s IC TC74AC138F
IC36-51	8-752-327-58	s IC CXK581001M-70L
IC52	8-759-243-78	s IC TC74AC139F
IC53	8-759-243-06	s IC TC74AC04F
IC54	8-759-998-41	s IC MB89394-PF
IC55	8-759-973-34	s IC RTC-62421B
IC56	8-759-243-74	s IC TC74AC138F
IC57	8-759-938-75	s IC MAX232CPE
IC58	8-759-973-43	s IC MB8421-90LPFQ
IC59	8-759-704-67	s IC HD647180FS-SIO-V1.0
IC60	8-759-973-43	s IC MB8421-90LPFQ
IC61	8-759-704-68	s IC HD647180CP-SIO-V1.0
IC62	8-759-973-43	s IC MB8421-90LPFQ
IC63	8-759-704-67	s IC HD647180FS-SIO-V1.0
IC64	8-759-926-12	s IC SN74HC139ANS
IC65	8-759-926-12	s IC SN74HC139ANS
IC66	8-759-243-06	s IC TC74AC04F
IC67	8-759-938-75	s IC MAX232CPE
IC68	8-759-008-57	s IC MC34051P
IC69	8-759-008-57	s IC MC34051P
IC70	8-759-008-57	s IC MC34051P
IC71	8-759-244-10	s IC TC74AC174F
IC72	8-759-938-68	s IC CXD1095Q
IC73	8-759-938-68	s IC CXD1095Q
IC74	8-759-044-95	s IC MC14495P
IC75	8-759-044-95	s IC MC14495P
IC76	8-759-244-71	s IC TC74AC540F
IC77	8-759-506-91	s IC ICL7621BCSA
IC78	8-759-506-91	s IC ICL7621BCSA
IC79	8-759-100-96	s IC UPC4558G2
IC80	8-759-231-93	s IC TC74HC4051AF
IC81	8-759-505-29	s IC SM6103S
IC82	8-759-505-00	s IC CXD8052Q
IC83	8-759-945-30	s IC SN75ALS194N
IC84	8-759-945-30	s IC SN75ALS194N
IC85	8-759-505-27	s IC SN75ALS195J
IC86	8-759-505-27	s IC SN75ALS195J
IC87	8-759-243-90	s IC TC74AC157F
IC88-95	8-752-327-58	s IC CXK581001M-70L
IC96	8-759-243-06	s IC TC74AC04F
IC97	8-759-973-43	s IC MB8421-90LPFQ
IC98	8-759-704-67	s IC HD647180FS-SIO-V1.0
IC99	8-759-973-43	s IC MB8421-90LPFQ
IC100	8-759-704-67	s IC HD647180FS-SIO-V1.0
IC101	8-759-926-12	s IC SN74HC139ANS
IC102	8-759-008-57	s IC MC34051P
IC103	8-759-008-57	s IC MC34051P
IC104	8-759-506-92	s IC LT1009CZ
IC105	8-759-243-06	s IC TC74AC04F
IC106	8-759-243-06	s IC TC74AC04F
IC107	8-759-243-74	s IC TC74AC138F

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(CPU-57 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
L1,2	1-412-031-11 s	INDUCTOR CHIP 47uH
ND1	8-719-901-68 s	LED GL-6R202, RED
Q1	8-729-205-02 s	TRANSISTOR 2SA1150-Y
RB1	1-231-387-00 s	COMPOSITION CIRCUIT BLOCK
RY1-7	1-515-797-11 s	RELAY
S1	1-553-812-00 s	SWITCH, PUSH
S2	1-553-812-00 s	SWITCH, PUSH
S3	1-570-623-11 s	SWITCH, DIP 8-CKT
TH1	1-809-179-11 s	THERMISTOR 102AT-2
X1	1-577-170-11 s	OSCILLATOR, CRYSTAL
X2	1-577-382-11 s	OSCILLATOR, CRYSTAL (IC TYPE)
X3-7	1-567-812-11 s	RESONATOR, CERAMIC 12.288MHZ

SG-189 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-481-A o	MOUNTED CIRCUIT BOARD, SG-189
2pcs	3-166-184-01 o	LEVER, PC BOARD
2pcs	3-166-185-01 s	NUT, PLATE
6pcs	7-621-773-87 s	SCREW +B 2.6X10
2pcs	7-622-207-05 s	N 2.6, TYPE 2
2pcs	7-626-320-11 s	PIN, SPRING 3X8
2pcs	7-682-648-09 s	SCREW +PS 3X8
8pcs	7-682-948-01 s	SCREW +PSW 3X8
C1	1-124-287-00 s	ELECT 10uF 20% 10V
C2	1-163-110-00 s	CERAMIC, CHIP 51pF 5% 50V
C3	1-163-125-00 s	CERAMIC, CHIP 220pF 5% 50V
C4	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C5	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C6	1-163-141-00 s	CERAMIC, CHIP 0.001uF 5% 50V
C7	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C8	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C9	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C11	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C12	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C14-18	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C19	1-163-135-00 s	CERAMIC, CHIP 560pF 5% 50V
C20	1-163-141-00 s	CERAMIC, CHIP 0.001uF 5% 50V
C21	1-135-091-00 s	TANTALUM, CHIP 1uF 10% 16V
C22-27	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C28	1-124-941-11 s	ELECT 390uF 20% 6.3V
C29	1-124-941-11 s	ELECT 390uF 20% 6.3V
C30-53	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C54	1-163-017-00 s	CERAMIC, CHIP 0.0047uF 5% 50V
C55	1-163-121-00 s	CERAMIC, CHIP 150pF 5% 50V
C56-60	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C61	1-163-251-11 s	CERAMIC 100pF 5% 50V
C62-82	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C84-87	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C89-93	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C95-99	1-164-232-11 s	CERAMIC 0.01uF 10% 50V
C100	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C101	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C102	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C201	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C203	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C204	1-163-263-11 s	CERAMIC 330pF 5% 50V
C205	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C206	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C207	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C208	1-126-392-11 s	ELECT, CHIP 100uF 20% 6.3V
C209	1-126-392-11 s	ELECT, CHIP 100uF 20% 6.3V
C211	1-163-263-11 s	CERAMIC 330pF 5% 50V
C212	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C213	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C301	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C302	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C303	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C304	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C305	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C306	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C307	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C308	1-126-394-11 s	ELECT, CHIP 10uF 20% 16V
C309	1-126-394-11 s	ELECT, CHIP 10uF 20% 16V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(SG-189 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C310	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C311	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C312	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C313	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C314	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C315	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C316	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C401	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C402	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C403	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C404	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C405	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C406	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C407	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C408	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C409	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C410	1-126-396-11	s ELECT, CHIP 47uF 20% 16V
C411	1-126-396-11	s ELECT, CHIP 47uF 20% 16V
C412	1-163-109-00	s CERAMIC, CHIP 47pF 5% 50V
C413	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C501	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C502	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C503	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C504	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C505	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C506	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C507	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C508	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C509	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C510	1-126-396-11	s ELECT, CHIP 47uF 20% 16V
C511	1-126-396-11	s ELECT, CHIP 47uF 20% 16V
C512	1-163-109-00	s CERAMIC, CHIP 47pF 5% 50V
C513	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C601	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C602	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C603	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C604	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C605	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C606	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C607	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C608	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C609	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C610	1-126-396-11	s ELECT, CHIP 47uF 20% 16V
C611	1-126-396-11	s ELECT, CHIP 47uF 20% 16V
C612	1-163-109-00	s CERAMIC, CHIP 47pF 5% 50V
C613	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C701	1-126-396-11	s ELECT, CHIP 47uF 20% 16V
C702	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C705	1-163-235-11	s CERAMIC 22pF 5% 50V
C706	1-163-123-00	s CERAMIC, CHIP 180pF 5% 50V
C707	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C708	1-126-396-11	s ELECT, CHIP 47uF 20% 16V
C710	1-126-396-11	s ELECT, CHIP 47uF 20% 16V
C711	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C717	1-126-396-11	s ELECT, CHIP 47uF 20% 16V
C718	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
CN1	1-566-513-11	s CONNECTOR, FPC (ZIF) 13P
CN2	1-561-310-00	s CONNECTOR, COAXIAL, MALE

(SG-189 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
CN3	1-563-322-11	s CONNECTOR, D-SUB(MOUNT TYPE)25P
CNI17	1-526-816-21	o SOCKET, IC (DP) 24P
CNI35	1-526-816-21	o SOCKET, IC (DP) 24P
CNI36	1-526-816-21	o SOCKET, IC (DP) 24P
CNX1	1-565-207-21	s CONNECTOR, DIN 128P, MALE
CNY1	1-565-207-21	s CONNECTOR, DIN 128P, MALE
CNZ1	1-500	
CV401	1-141-304-21	s CAP, TRIMMER 10PF
CV501	1-141-304-21	s CAP, TRIMMER 10PF
CV601	1-141-304-21	s CAP, TRIMMER 10PF
D1-3	8-719-800-76	s DIODE 1SS226
D4	8-719-400-35	s LED LN35BP, GRN
D5-7	8-719-800-76	s DIODE 1SS226
D300	8-719-800-76	s DIODE 1SS226
D301	8-719-800-76	s DIODE 1SS226
D302	8-719-800-76	s DIODE 1SS226
D303	8-719-800-76	s DIODE 1SS226
D304	8-719-800-76	s DIODE 1SS226
D305	8-719-800-76	s DIODE 1SS226
D306	8-719-800-76	s DIODE 1SS226
D307	8-719-800-76	s DIODE 1SS226
D308	8-719-800-76	s DIODE 1SS226
D309	8-719-800-76	s DIODE 1SS226
D310	8-719-800-76	s DIODE 1SS226
D311	8-719-800-76	s DIODE 1SS226
D312	8-719-800-76	s DIODE 1SS226
D313	8-719-800-76	s DIODE 1SS226
D314	8-719-800-76	s DIODE 1SS226
D315	8-719-800-76	s DIODE 1SS226
D316	8-719-800-76	s DIODE 1SS226
D317	8-719-800-76	s DIODE 1SS226
D318	8-719-800-76	s DIODE 1SS226
D319	8-719-800-76	s DIODE 1SS226
D320	8-719-800-76	s DIODE 1SS226
D321	8-719-800-76	s DIODE 1SS226
D322	8-719-800-76	s DIODE 1SS226
D323	8-719-800-76	s DIODE 1SS226
D324	8-719-800-76	s DIODE 1SS226
D325	8-719-800-76	s DIODE 1SS226
D326	8-719-800-76	s DIODE 1SS226
D327	8-719-800-76	s DIODE 1SS226
D328	8-719-800-76	s DIODE 1SS226
D329	8-719-800-76	s DIODE 1SS226
D330	8-719-800-76	s DIODE 1SS226
D331	8-719-800-76	s DIODE 1SS226
D332	8-719-800-76	s DIODE 1SS226
D333	8-719-800-76	s DIODE 1SS226
D334	8-719-800-76	s DIODE 1SS226
D335	8-719-800-76	s DIODE 1SS226
F1,2	▲1-576-031-11	s FUSE, MICRO 10A
FL401	1-236-965-11	s FILTER, LOW PASS
FL501	1-236-966-11	s FILTER, LOW PASS
FL601	1-236-966-11	s FILTER, LOW PASS
IC1	8-759-908-17	s IC TL082CPS

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(SG-189 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC2	8-759-230-99	s IC TC74HC4053AF
IC3	8-759-987-27	s IC LM1881M
IC4	8-759-996-34	s IC LM360M
IC5	8-759-925-74	s IC SN74HC04ANS
IC6	8-759-008-52	s IC TC74HC123AF
IC7	8-759-925-72	s IC SN74HC02ANS
IC8	8-759-239-58	s IC TC74HC221AF
IC9	8-752-306-51	s IC CX23065
IC10	8-759-243-06	s IC TC74AC04F
IC11	8-759-243-09	s IC TC74AC74F
IC12	8-759-244-15	s IC TC74AC240F
IC13	8-759-243-50	s IC TC74AC08F
IC14	8-759-244-15	s IC TC74AC240F
IC15	8-752-304-30	s IC CX23043
IC16	8-759-918-40	s IC CX20194
IC17	8-759-792-89	s IC WS57C45-HDT-V1.0
IC18	8-759-925-90	s IC SN74HC74ANS
IC19	8-759-244-15	s IC TC74AC240F
IC20	8-759-243-06	s IC TC74AC04F
IC21	8-759-323-08	s IC HM63021FP-28
IC22	8-759-244-85	s IC TC74AC574F
IC23	8-759-244-85	s IC TC74AC574F
IC24	8-759-244-15	s IC TC74AC240F
IC25	8-759-244-15	s IC TC74AC240F
IC26	8-759-205-37	s IC SN74HC574ANS
IC27	8-759-244-85	s IC TC74AC574F
IC28	8-759-244-85	s IC TC74AC574F
IC29	8-759-323-08	s IC HM63021FP-28
IC30	8-759-239-58	s IC TC74HC221AF
IC31	8-759-505-00	s IC CXD8052Q
IC32	8-759-720-48	s IC CAT35C104HP
IC33	8-759-945-30	s IC SN75ALS194N
IC34	8-752-304-30	s IC CX23043
IC35	8-759-792-87	s IC WS57C45-525V-V1.0
IC36	8-759-792-88	s IC WS57C45-625V-V1.0
IC38	8-759-243-62	s IC TC74AC32F
IC39	8-759-244-85	s IC TC74AC574F
IC40	8-759-243-09	s IC TC74AC74F
IC41	8-759-505-27	s IC SN75ALS195J
IC42	8-759-244-71	s IC TC74AC540F
IC43	8-759-243-50	s IC TC74AC08F
IC44	8-759-243-50	s IC TC74AC08F
IC45	8-759-239-23	s IC SN74HC86ANS
IC46	8-759-505-06	s IC CXD8058Q
IC47	8-759-505-06	s IC CXD8058Q
IC48	8-759-323-08	s IC HM63021FP-28
IC49	8-759-505-06	s IC CXD8058Q
IC50	8-759-244-85	s IC TC74AC574F
IC51	8-759-323-08	s IC HM63021FP-28
IC52	8-759-505-06	s IC CXD8058Q
IC53	8-759-504-97	s IC CXD8190Q
IC54	8-759-504-97	s IC CXD8190Q
IC55	8-759-244-85	s IC TC74AC574F
IC56	8-759-948-40	s IC DS1000M-50
IC57	8-759-504-97	s IC CXD8190Q
IC58	8-759-504-97	s IC CXD8190Q
IC59	8-759-926-08	s IC SN74HC133NS
IC60	8-759-504-97	s IC CXD8190Q
IC61	8-759-244-85	s IC TC74AC574F

(SG-189 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC62	8-759-244-85	s IC TC74AC574F
IC63	8-759-012-02	s IC MC10H124M
IC64	8-759-925-74	s IC SN74HC04ANS
IC65	8-759-234-77	s IC TC4S66F-TE85L
IC66	8-759-243-09	s IC TC74AC74F
IC67	8-759-244-15	s IC TC74AC240F
IC68	8-759-243-09	s IC TC74AC74F
IC69	8-759-205-37	s IC SN74HC574ANS
IC70	8-759-505-01	s IC CXD8054S
IC71	8-759-948-40	s IC DS1000M-50
IC201	8-759-983-10	s IC MAX452CSA
IC202	8-752-020-11	s IC CX20201A-1
IC203	8-752-202-90	s IC CX22029
IC204	8-759-908-15	s IC TL431CLP
IC301	8-759-505-06	s IC CXD8058Q
IC302	8-759-505-06	s IC CXD8058Q
IC303	8-759-244-71	s IC TC74AC540F
IC304	8-759-244-71	s IC TC74AC540F
IC305	8-759-244-71	s IC TC74AC540F
IC306	8-759-244-71	s IC TC74AC540F
IC307	8-759-244-71	s IC TC74AC540F
IC401	8-752-202-90	s IC CX22029
IC402	8-752-020-11	s IC CX20201A-1
IC403	8-759-983-10	s IC MAX452CSA
IC404	8-759-908-15	s IC TL431CLP
IC501	8-752-202-90	s IC CX22029
IC502	8-752-020-11	s IC CX20201A-1
IC503	8-759-983-10	s IC MAX452CSA
IC504	8-759-908-15	s IC TL431CLP
IC601	8-752-202-90	s IC CX22029
IC602	8-752-020-11	s IC CX20201A-1
IC603	8-759-983-10	s IC MAX452CSA
IC604	8-759-908-15	s IC TL431CLP
L1	1-410-719-31	s INDUCTOR CHIP 150uH
L2	1-421-370-00	s COIL, CHOKE
L3	1-421-370-00	s COIL, CHOKE
L4	1-408-785-21	s INDUCTOR CHIP 47uH
L5	1-408-785-21	s INDUCTOR CHIP 47uH
L201	1-410-703-21	s INDUCTOR, CHIP 6.8uH
L401	1-408-785-21	s INDUCTOR CHIP 47uH
L402	1-408-785-21	s INDUCTOR CHIP 47uH
L403	1-408-785-21	s INDUCTOR CHIP 47uH
L501	1-408-785-21	s INDUCTOR CHIP 47uH
L502	1-408-785-21	s INDUCTOR CHIP 47uH
L503	1-408-785-21	s INDUCTOR CHIP 47uH
L601	1-408-785-21	s INDUCTOR CHIP 47uH
L602	1-408-785-21	s INDUCTOR CHIP 47uH
L603	1-408-785-21	s INDUCTOR CHIP 47uH
L701	1-408-785-21	s INDUCTOR CHIP 47uH
L703	1-410-717-31	s INDUCTOR, CHIP 100uH
L704	1-408-785-21	s INDUCTOR CHIP 47uH
L711	1-408-785-21	s INDUCTOR CHIP 47uH
L714	1-408-785-21	s INDUCTOR CHIP 47uH
Q1	8-729-175-72	s TRANSISTOR 2SC2757-T33
Q2	8-729-122-63	s TRANSISTOR 2SA1226
Q3	8-729-175-72	s TRANSISTOR 2SC2757-T33
Q701	8-729-122-63	s TRANSISTOR 2SA1226
Q702	8-729-175-72	s TRANSISTOR 2SC2757-T33

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(SG-189 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q711	8-729-122-63	s TRANSISTOR 2SA1226
Q712	8-729-122-63	s TRANSISTOR 2SA1226
R7	1-218-772-91	s METAL 680k 0.50% 1/10W
R67	1-216-646-11	s METAL, CHIP 620 0.5% 1/10W
R68	1-216-646-11	s METAL, CHIP 620 0.5% 1/10W
R69	1-216-646-11	s METAL, CHIP 620 0.5% 1/10W
R70	1-216-646-11	s METAL, CHIP 620 0.5% 1/10W
R71	1-216-646-11	s METAL, CHIP 620 0.5% 1/10W
R72	1-216-646-11	s METAL, CHIP 620 0.5% 1/10W
R73	1-216-646-11	s METAL, CHIP 620 0.5% 1/10W
R74	1-216-646-11	s METAL, CHIP 620 0.5% 1/10W
R410	1-216-295-00	s METAL, CHIP 0-OHM
R416	1-216-295-00	s METAL, CHIP 0-OHM
R510	1-216-295-00	s METAL, CHIP 0-OHM
R516	1-216-295-00	s METAL, CHIP 0-OHM
R610	1-216-295-00	s METAL, CHIP 0-OHM
R616	1-216-295-00	s METAL, CHIP 0-OHM
R715	1-216-295-00	s METAL, CHIP 0-OHM
R717	1-216-295-00	s METAL, CHIP 0-OHM
R719	1-216-295-00	s METAL, CHIP 0-OHM
RV202	1-237-033-11	s RES, ADJ, METAL 1K
RV401	1-237-033-11	s RES, ADJ, METAL 1K
RV402	1-237-035-11	s RES, ADJ, METAL 5K
RV501	1-237-033-11	s RES, ADJ, METAL 1K
RV502	1-237-035-11	s RES, ADJ, METAL 5K
RV601	1-237-033-11	s RES, ADJ, METAL 1K
RV602	1-237-035-11	s RES, ADJ, METAL 5K
RV701	1-237-033-11	s RES, ADJ, METAL 1K
RV702	1-237-032-11	s RES, ADJ, METAL 500
RY1-36	1-515-797-11	s RELAY
S1	1-571-146-11	s SWITCH, ROTARY
S2	1-553-441-21	s SWITCH, TOGGLE
S3	1-572-161-11	s SWITCH, ROTARY
S4	1-572-161-11	s SWITCH, ROTARY
TH1	1-809-179-11	s THERMISTOR 102AT-2
VC01	1-577-597-11	s OSCILLATOR, CRYSTAL

WKG-5 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-441-A	o MOUNTED CIRCUIT BOARD, WKG-5
4pcs	1-526-653-21	s SOCKET, IC (DP) 14P
2pcs	3-166-184-01	o LEVER, PC BOARD
2pcs	3-166-185-01	s NUT, PLATE
6pcs	7-621-773-87	s SCREW +B 2.6X10
2pcs	7-622-207-05	s N 2.6, TYPE 2
2pcs	7-626-320-11	s PIN, SPRING 3X8
8pcs	7-682-948-01	s SCREW +PSW 3X8
C1-12	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C14-24	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C101	1-163-251-11	s CERAMIC 100pF 5% 50V
C200	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C201	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C202	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C203	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C204	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C205	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C206	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C207	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C208	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C209	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C210	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C211	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C212	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C213	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C214	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C215	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C216	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C217	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C301	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C302	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C303	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C304	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C305	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C306	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C307	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C308	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C309	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C310	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C311	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C312	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C313	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C315	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C316	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C317	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C400	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C401	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C402	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C403	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C404	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C405	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C406	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C407	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C408	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C409	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C410	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C411	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C412	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(WKG-5 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C413	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C414	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C415	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C416	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C417	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C418	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C419	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C420	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C421	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C422	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C423	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C428	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C429	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C430	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C431	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C432	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C433	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C434	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C435	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C436	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C437	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C438	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C439	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C440	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C441	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C442	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C443	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C444	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C445	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C446	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C447	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C448	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C449	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C450	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C451	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C452	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C453	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C454	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
CN130	1-580-365-11	o	CONNECTOR, FPC (DIP TYPE) 13P
CN131	1-580-365-11	o	CONNECTOR, FPC (DIP TYPE) 13P
CN401	1-580-365-11	o	CONNECTOR, FPC (DIP TYPE) 13P
CN402	1-580-365-11	o	CONNECTOR, FPC (DIP TYPE) 13P
CN403	1-580-365-11	o	CONNECTOR, FPC (DIP TYPE) 13P
CNI200	1-526-816-21	o	SOCKET, IC (DP) 24P
CNI201	1-526-816-21	o	SOCKET, IC (DP) 24P
CNI311	1-526-654-00	s	SOCKET, IC (DP) 16P
CNI312	1-526-654-00	s	SOCKET, IC (DP) 16P
CNI313	1-526-654-00	s	SOCKET, IC (DP) 16P
CNI407	1-526-816-21	o	SOCKET, IC (DP) 24P
CNI417	1-526-660-21	s	SOCKET, IC (DP) 32P
CNI418	1-526-660-21	s	SOCKET, IC (DP) 32P
CNX1	1-565-207-21	s	CONNECTOR, DIN 128P, MALE
CNY1	1-565-207-21	s	CONNECTOR, DIN 128P, MALE
CNZ1	1-506-748-11	s	CONNECTOR, DIN 96P, MALE
D1	8-719-800-76	s	DIODE 1SS226

(WKG-5 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
F1	▲1-576-031-11	s	FUSE, MICRO 10A
IC1	8-759-234-77	s	IC TC4S66F-TE85L
IC2	8-759-244-71	s	IC TC74AC540F
IC3	8-759-244-71	s	IC TC74AC540F
IC4	8-759-505-27	s	IC SN75ALS195J
IC5	8-759-945-30	s	IC SN75ALS194N
IC6	8-759-505-00	s	IC CXD8052Q
IC7	8-759-505-00	s	IC CXD8052Q
IC8	8-759-720-48	s	IC CAT35C104HP
IC9	8-759-244-75	s	IC TC74AC541F
IC10	8-759-505-06	s	IC CXD8058Q
IC11	8-759-505-06	s	IC CXD8058Q
IC12	8-759-505-06	s	IC CXD8058Q
IC14	8-759-244-71	s	IC TC74AC540F
IC15	8-759-244-85	s	IC TC74AC574F
IC16	8-759-927-46	s	IC SN74HC00ANS
IC17	8-759-925-90	s	IC SN74HC74ANS
IC18	8-759-505-06	s	IC CXD8058Q
IC19	8-759-242-51	s	IC TC74AC86F
IC200	8-759-704-27	s	IC WS57C45-SIN1-V1.0
IC201	8-759-704-28	s	IC WS57C45-SIN2-V1.0
IC202	8-759-504-91	s	IC CXD8062Q
IC203	8-759-505-02	s	IC CXD8053Q
IC204	8-759-505-07	s	IC CXD8059Q
IC205	8-759-504-97	s	IC CXD8190Q
IC206	8-759-505-07	s	IC CXD8059Q
IC207	8-759-504-90	s	IC CXD8063Q
IC208	8-759-504-90	s	IC CXD8063Q
IC209	8-759-504-97	s	IC CXD8190Q
IC210	8-759-504-90	s	IC CXD8063Q
IC211	8-759-504-90	s	IC CXD8063Q
IC212	8-759-504-91	s	IC CXD8062Q
IC213	8-759-505-08	s	IC CXD8060Q
IC214	8-759-320-87	s	IC HM63021P-28
IC215	8-759-320-87	s	IC HM63021P-28
IC300	8-759-244-04	s	IC TC74AC163F
IC301	8-759-926-24	s	IC SN74HC164NS
IC302	8-759-926-24	s	IC SN74HC164NS
IC303	8-759-926-24	s	IC SN74HC164NS
IC304	8-759-926-24	s	IC SN74HC164NS
IC305	8-759-242-51	s	IC TC74AC86F
IC306	8-759-504-91	s	IC CXD8062Q
IC307	8-759-504-91	s	IC CXD8062Q
IC308	8-759-205-37	s	IC SN74HC574ANS
IC309	8-759-320-87	s	IC HM63021P-28
IC310	8-759-320-87	s	IC HM63021P-28
IC311	8-759-519-26	s	IC MSM514221A-4RS
IC312	8-759-519-26	s	IC MSM514221A-4RS
IC313	8-759-519-26	s	IC MSM514221A-4RS
IC315	8-759-504-91	s	IC CXD8062Q
IC316	8-759-205-37	s	IC SN74HC574ANS
IC317	8-759-504-90	s	IC CXD8063Q
IC400	8-759-926-23	s	IC SN74HC163ANS
IC401	8-759-926-23	s	IC SN74HC163ANS
IC402	8-759-925-99	s	IC SN74HC109NS
IC403	8-759-925-72	s	IC SN74HC02ANS
IC404	8-759-243-39	s	IC TC74AC00F
IC405	8-759-926-23	s	IC SN74HC163ANS

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(WKG-5 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC406	8-759-926-23 s	IC SN74HC163ANS
IC407	8-759-704-26 s	IC WS57C45-MSCNT-V1.0
IC408	8-759-926-23 s	IC SN74HC163ANS
IC409	8-759-926-23 s	IC SN74HC163ANS
IC410	8-759-242-51 s	IC TC74AC86F
IC411	8-759-242-51 s	IC TC74AC86F
IC412	8-759-242-51 s	IC TC74AC86F
IC413	8-759-243-43 s	IC TC74AC02F
IC414	8-759-926-17 s	IC SN74HC153ANS
IC415	8-759-926-17 s	IC SN74HC153ANS
IC416	8-759-926-17 s	IC SN74HC153ANS
IC417	8-759-551-75 s	IC WS27C010L-UMSC-V1.1
IC418	8-759-551-76 s	IC WS27C010L-LMSC-V1.1
IC419	8-759-205-37 s	IC SN74HC574ANS
IC420	8-759-205-37 s	IC SN74HC574ANS
IC421	8-759-205-37 s	IC SN74HC574ANS
IC422	8-759-205-37 s	IC SN74HC574ANS
IC423	8-759-205-37 s	IC SN74HC574ANS
IC428	8-759-205-37 s	IC SN74HC574ANS
IC429	8-759-205-37 s	IC SN74HC574ANS
IC430	8-759-205-37 s	IC SN74HC574ANS
IC431	8-759-205-37 s	IC SN74HC574ANS
IC432	8-759-205-37 s	IC SN74HC574ANS
IC433	8-759-205-37 s	IC SN74HC574ANS
IC434	8-759-205-37 s	IC SN74HC574ANS
IC435	8-759-504-91 s	IC CXD8062Q
IC436	8-759-504-91 s	IC CXD8062Q
IC437	8-759-504-91 s	IC CXD8062Q
IC438	8-759-244-81 s	IC TC74AC564F
IC439	8-759-244-81 s	IC TC74AC564F
IC440	8-759-244-81 s	IC TC74AC564F
IC441	8-759-244-81 s	IC TC74AC564F
IC442	8-759-244-81 s	IC TC74AC564F
IC443	8-759-244-81 s	IC TC74AC564F
IC444	8-759-013-95 s	IC MC74HC589F
IC445	8-759-013-95 s	IC MC74HC589F
IC446	8-759-013-95 s	IC MC74HC589F
IC447	8-759-013-95 s	IC MC74HC589F
IC448	8-759-013-95 s	IC MC74HC589F
IC449	8-759-013-95 s	IC MC74HC589F
IC450	8-759-925-74 s	IC SN74HC04ANS
IC451	8-759-205-37 s	IC SN74HC574ANS
IC452	8-759-205-37 s	IC SN74HC574ANS
IC453	8-759-205-37 s	IC SN74HC574ANS
IC454	8-759-205-37 s	IC SN74HC574ANS
R28, 29	1-216-021-00 s	METAL, CHIP 68 5% 1/10W
TH10	1-809-179-11 s	THERMISTOR 102AT-2

WKG-4 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-442-A o	MOUNTED CIRCUIT BOARD, WKG-4
2pcs	3-166-184-01 o	LEVER, PC BOARD
2pcs	3-166-185-01 s	NUT, PLATE
6pcs	7-621-773-87 s	SCREW +B 2.6X10
2pcs	7-622-207-05 s	N 2.6, TYPE 2
2pcs	7-626-320-11 s	PIN, SPRING 3X8
8pcs	7-682-948-01 s	SCREW +PSW 3X8
C10-17	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C20-27	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C40-43	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C51-57	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C90	1-163-251-11 s	CERAMIC 100pF 5% 50V
C91-95	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C101	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C102	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C103	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C104	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C105	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C106	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C107	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C108	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C109	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C110	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C111	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C112	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C113	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C114	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C115	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C116	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C117	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C118	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C120	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C121	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C125	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C126	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C129	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C130	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C131	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C132	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C133	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C134	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C135	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C136	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C137	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C138	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C139	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C140	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C150	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C151	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C152	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C153	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C154	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C155	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C156	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C157	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C158	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C159	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C160	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(WKG-4 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C161	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C162	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C163	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C164	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C165	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C166	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C167	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C168	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C169	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C170	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C171	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C172	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C173	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C174	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C190	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C191	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C201	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C202	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C203	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C204	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C205	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C206	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C207	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C208	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C209	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C210	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C211	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C212	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C213	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C214	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C215	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C216	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C217	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C218	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C220	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C221	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C225	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C226	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C229	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C230	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C231	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C232	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C233	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C234	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C235	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C236	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C237	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C238	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C239	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C240	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C250	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C251	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C252	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C253	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C254	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C255	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C256	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C257	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C258	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V

(WKG-4 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C259	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C260	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C261	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C262	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C263	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C264	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C265	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C266	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C267	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C268	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C269	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C270	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C271	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C272	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C273	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C274	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C290	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C291	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
CN101	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN102	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN130	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN131	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN132	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN133	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN134	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN201	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN202	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN230	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN231	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN232	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN233	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN234	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CNI106	1-526-660-21 s	SOCKET, IC (DP) 32P
CNI107	1-526-660-21 s	SOCKET, IC (DP) 32P
CNI115	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI116	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI165	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI166	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI206	1-526-660-21 s	SOCKET, IC (DP) 32P
CNI207	1-526-660-21 s	SOCKET, IC (DP) 32P
CNI215	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI216	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI265	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI266	1-526-816-21 o	SOCKET, IC (DP) 24P
CNX1	1-565-207-21 s	CONNECTOR, DIN 128P, MALE
CNY1	1-565-207-21 s	CONNECTOR, DIN 128P, MALE
CNZ1	1-506-748-11 s	CONNECTOR, DIN 96P, MALE
D10	8-719-800-76 s	DIODE 1SS226
F10	▲1-576-031-11 s	FUSE, MICRO 10A
IC10	8-759-505-27 s	IC SN75ALS195J
IC11	8-759-945-30 s	IC SN75ALS194N
IC12	8-759-505-00 s	IC CXD8052Q
IC13	8-759-505-00 s	IC CXD8052Q
IC14	8-759-234-77 s	IC TC4S66F-TE85L

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(WKG-4 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC15	8-759-720-48 s	IC CAT35C104HP
IC16	8-759-243-66 s	IC TC74ACT74F
IC17	8-759-244-06 s	IC TC74AC164F
IC20	8-759-244-71 s	IC TC74AC540F
IC21	8-759-244-71 s	IC TC74AC540F
IC22	8-759-244-71 s	IC TC74AC540F
IC23	8-759-244-75 s	IC TC74AC541F
IC24	8-759-244-75 s	IC TC74AC541F
IC25	8-759-205-37 s	IC SN74HC574ANS
IC26	8-759-244-71 s	IC TC74AC540F
IC27	8-759-243-39 s	IC TC74AC00F
IC40	8-759-505-06 s	IC CXD8058Q
IC41	8-759-505-06 s	IC CXD8058Q
IC42	8-759-505-06 s	IC CXD8058Q
IC43	8-759-504-97 s	IC CXD8190Q
IC51	8-759-948-02 s	IC 74F86SJ
IC52	8-759-989-02 s	IC 74F02SJ
IC53	8-752-304-30 s	IC CX23043
IC54	8-759-244-04 s	IC TC74AC163F
IC55	8-759-243-47 s	IC TC74ACT04F
IC56	8-752-304-30 s	IC CX23043
IC57	8-759-244-04 s	IC TC74AC163F
IC101	8-759-245-77 s	IC TC74ACT574F
IC102	8-759-245-77 s	IC TC74ACT574F
IC103	8-759-505-07 s	IC CXD8059Q
IC104	8-759-504-91 s	IC CXD8062Q
IC105	8-759-243-06 s	IC TC74AC04F
IC106	8-759-704-18 s	IC WS27C010L-PAT1-V1.0
IC107	8-759-704-19 s	IC WS27C010L-PAT2-V1.0
IC108	8-759-245-77 s	IC TC74ACT574F
IC109	8-759-245-77 s	IC TC74ACT574F
IC110	8-759-504-90 s	IC CXD8063Q
IC111	8-759-205-37 s	IC SN74HC574ANS
IC112	8-759-205-37 s	IC SN74HC574ANS
IC113	8-759-504-91 s	IC CXD8062Q
IC114	8-759-504-91 s	IC CXD8062Q
IC115	8-759-704-27 s	IC WS57C45-SIN1-V1.0
IC116	8-759-704-28 s	IC WS57C45-SIN2-V1.0
IC117	8-759-504-91 s	IC CXD8062Q
IC118	8-759-505-02 s	IC CXD8053Q
IC120	8-759-243-06 s	IC TC74AC04F
IC121	8-759-243-43 s	IC TC74AC02F
IC129	8-759-505-02 s	IC CXD8053Q
IC130	8-759-505-07 s	IC CXD8059Q
IC131	8-759-504-97 s	IC CXD8190Q
IC132	8-759-505-07 s	IC CXD8059Q
IC133	8-759-504-90 s	IC CXD8063Q
IC134	8-759-504-90 s	IC CXD8063Q
IC135	8-759-504-97 s	IC CXD8190Q
IC136	8-759-504-90 s	IC CXD8063Q
IC137	8-759-504-90 s	IC CXD8063Q
IC138	8-759-504-91 s	IC CXD8062Q
IC139	8-759-505-08 s	IC CXD8060Q
IC140	8-759-243-06 s	IC TC74AC04F
IC150	8-759-205-37 s	IC SN74HC574ANS
IC151	8-759-205-37 s	IC SN74HC574ANS
IC152	8-759-245-77 s	IC TC74ACT574F
IC153	8-759-245-77 s	IC TC74ACT574F
IC154	8-759-504-91 s	IC CXD8062Q

(WKG-4 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC155	8-759-504-91 s	IC CXD8062Q
IC156	8-759-505-31 s	IC MB81C78A-35P-SK
IC157	8-759-505-31 s	IC MB81C78A-35P-SK
IC158	8-759-505-31 s	IC MB81C78A-35P-SK
IC159	8-759-505-31 s	IC MB81C78A-35P-SK
IC160	8-759-504-97 s	IC CXD8190Q
IC161	8-759-927-23 s	IC SN74HCT574ANS
IC162	8-759-927-23 s	IC SN74HCT574ANS
IC163	8-759-504-91 s	IC CXD8062Q
IC164	8-759-504-91 s	IC CXD8062Q
IC165	8-759-704-24 s	IC WS57C49B-REV1-V1.0
IC166	8-759-704-25 s	IC WS57C49B-REV2-V1.0
IC167	8-759-505-09 s	IC CXD8061Q
IC168	8-759-205-37 s	IC SN74HC574ANS
IC169	8-759-205-37 s	IC SN74HC574ANS
IC170	8-759-244-81 s	IC TC74AC564F
IC171	8-759-244-81 s	IC TC74AC564F
IC172	8-759-013-95 s	IC MC74HC589F
IC173	8-759-013-95 s	IC MC74HC589F
IC174	8-759-243-43 s	IC TC74AC02F
IC201	8-759-245-77 s	IC TC74ACT574F
IC202	8-759-245-77 s	IC TC74ACT574F
IC203	8-759-505-07 s	IC CXD8059Q
IC204	8-759-504-91 s	IC CXD8062Q
IC205	8-759-243-06 s	IC TC74AC04F
IC206	8-759-704-18 s	IC WS27C010L-PAT1-V1.0
IC207	8-759-704-19 s	IC WS27C010L-PAT2-V1.0
IC208	8-759-245-77 s	IC TC74ACT574F
IC209	8-759-245-77 s	IC TC74ACT574F
IC210	8-759-504-90 s	IC CXD8063Q
IC211	8-759-205-37 s	IC SN74HC574ANS
IC212	8-759-205-37 s	IC SN74HC574ANS
IC213	8-759-504-91 s	IC CXD8062Q
IC214	8-759-504-91 s	IC CXD8062Q
IC215	8-759-704-27 s	IC WS57C45-SIN1-V1.0
IC216	8-759-704-28 s	IC WS57C45-SIN2-V1.0
IC217	8-759-504-91 s	IC CXD8062Q
IC218	8-759-505-02 s	IC CXD8053Q
IC220	8-759-243-06 s	IC TC74AC04F
IC221	8-759-243-43 s	IC TC74AC02F
IC229	8-759-505-02 s	IC CXD8053Q
IC230	8-759-505-07 s	IC CXD8059Q
IC231	8-759-504-97 s	IC CXD8190Q
IC232	8-759-505-07 s	IC CXD8059Q
IC233	8-759-504-90 s	IC CXD8063Q
IC234	8-759-504-90 s	IC CXD8063Q
IC235	8-759-504-97 s	IC CXD8190Q
IC236	8-759-504-90 s	IC CXD8063Q
IC237	8-759-504-90 s	IC CXD8063Q
IC238	8-759-504-91 s	IC CXD8062Q
IC239	8-759-505-08 s	IC CXD8060Q
IC240	8-759-243-06 s	IC TC74AC04F
IC250	8-759-205-37 s	IC SN74HC574ANS
IC251	8-759-205-37 s	IC SN74HC574ANS
IC252	8-759-245-77 s	IC TC74ACT574F
IC253	8-759-245-77 s	IC TC74ACT574F
IC254	8-759-504-91 s	IC CXD8062Q
IC255	8-759-504-91 s	IC CXD8062Q
IC256	8-759-505-31 s	IC MB81C78A-35P-SK

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(WKG-4 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC257	8-759-505-31 s	IC MB81C78A-35P-SK
IC258	8-759-505-31 s	IC MB81C78A-35P-SK
IC259	8-759-505-31 s	IC MB81C78A-35P-SK
IC260	8-759-504-97 s	IC CXD8190Q
IC261	8-759-927-23 s	IC SN74HCT574ANS
IC262	8-759-927-23 s	IC SN74HCT574ANS
IC263	8-759-504-91 s	IC CXD8062Q
IC264	8-759-504-91 s	IC CXD8062Q
IC265	8-759-704-24 s	IC WS57C49B-REV1-V1.0
IC266	8-759-704-25 s	IC WS57C49B-REV2-V1.0
IC267	8-759-505-09 s	IC CXD8061Q
IC268	8-759-205-37 s	IC SN74HC574ANS
IC269	8-759-205-37 s	IC SN74HC574ANS
IC270	8-759-244-81 s	IC TC74AC564F
IC271	8-759-244-81 s	IC TC74AC564F
IC272	8-759-013-95 s	IC MC74HC589F
IC273	8-759-013-95 s	IC MC74HC589F
IC274	8-759-243-43 s	IC TC74AC02F
TH10	1-809-179-11 s	THERMISTOR 102AT-2

KPC-1 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-443-A o	MOUNTED CIRCUIT BOARD, KPC-1
2pcs	3-166-184-01 o	LEVER, PC BOARD
2pcs	3-166-185-01 s	NUT, PLATE
6pcs	7-621-773-87 s	SCREW +B 2.6X10
2pcs	7-622-207-05 s	N 2.6, TYPE 2
2pcs	7-626-320-11 s	PIN, SPRING 3X8
8pcs	7-682-948-01 s	SCREW +PSW 3X8
C1,2	1-163-251-11 s	CERAMIC 100pF 5% 50V
C3-170	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C300	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C301	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C302	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C303	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C304	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
CNI101	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CNI102	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CNI110	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CNI113	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI114	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI115	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI116	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI213	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI214	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI215	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI216	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI308	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI309	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI310	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI311	1-526-816-21 o	SOCKET, IC (DP) 24P
CNX1	1-565-207-21 s	CONNECTOR, DIN 128P, MALE
CNY1	1-565-207-21 s	CONNECTOR, DIN 128P, MALE
CNZ1	1-506-748-11 s	CONNECTOR, DIN 96P, MALE
D1	8-719-800-76 s	DIODE 1SS226
F1	A1-576-031-11 s	FUSE, MICRO 10A
IC1	8-759-505-27 s	IC SN75ALS195J
IC2	8-759-945-30 s	IC SN75ALS194N
IC3	8-759-505-00 s	IC CXD8052Q
IC4	8-759-720-48 s	IC CAT35C104HP
IC5	8-759-234-77 s	IC TC4S66F-TE85L
IC6	8-759-926-11 s	IC SN74HC138ANS
IC7	8-759-244-75 s	IC TC74AC541F
IC8	8-759-244-71 s	IC TC74AC540F
IC20	8-759-205-37 s	IC SN74HC574ANS
IC21	8-759-243-09 s	IC TC74AC74F
IC22	8-759-320-87 s	IC HM63021P-28
IC30	8-759-244-71 s	IC TC74AC540F
IC31	8-759-244-15 s	IC TC74AC240F
IC32	8-759-244-71 s	IC TC74AC540F
IC33	8-759-244-71 s	IC TC74AC540F
IC34	8-759-244-75 s	IC TC74AC541F
IC35	8-759-244-15 s	IC TC74AC240F
IC36	8-759-244-04 s	IC TC74AC163F
IC37	8-759-243-09 s	IC TC74AC74F
IC41	8-759-244-71 s	IC TC74AC540F

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(KPC-1 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC42	8-759-244-75 s	IC TC74AC541F
IC43	8-759-244-71 s	IC TC74AC540F
IC51-55	8-759-505-06 s	IC CXD8055Q
IC100	8-759-505-02 s	IC CXD8053Q
IC101	8-759-244-75 s	IC TC74AC541F
IC102	8-759-244-75 s	IC TC74AC541F
IC103	8-759-244-75 s	IC TC74AC541F
IC104	8-759-244-75 s	IC TC74AC541F
IC105	8-759-320-87 s	IC HM63021P-28
IC106	8-759-320-87 s	IC HM63021P-28
IC107	8-759-320-87 s	IC HM63021P-28
IC108	8-759-320-87 s	IC HM63021P-28
IC109	8-759-244-06 s	IC TC74AC164F
IC110	8-759-244-06 s	IC TC74AC164F
IC111	8-759-505-05 s	IC CXD8055Q
IC112	8-759-504-99 s	IC CXD8065Q
IC113	8-759-704-29 s	IC WS57C291B-K2U11-V1.0
IC114	8-759-704-30 s	IC WS57C291B-K2L11-V1.0
IC115	8-759-704-22 s	IC WS57C49B-K2U13-V1.0
IC116	8-759-704-23 s	IC WS57C49B-K2L13-V1.0
IC119	8-759-504-98 s	IC CXD8056Q
IC120	8-759-504-98 s	IC CXD8056Q
IC121	8-759-320-87 s	IC HM63021P-28
IC122	8-759-320-87 s	IC HM63021P-28
IC123	8-759-320-87 s	IC HM63021P-28
IC124	8-759-320-87 s	IC HM63021P-28
IC125	8-759-504-98 s	IC CXD8056Q
IC126	8-759-320-87 s	IC HM63021P-28
IC127	8-759-320-87 s	IC HM63021P-28
IC128	8-759-320-87 s	IC HM63021P-28
IC129	8-759-320-87 s	IC HM63021P-28
IC130	8-759-504-98 s	IC CXD8056Q
IC131	8-759-320-87 s	IC HM63021P-28
IC132	8-759-320-87 s	IC HM63021P-28
IC133	8-759-320-87 s	IC HM63021P-28
IC134	8-759-986-36 s	IC 74ACT257SJ
IC135	8-759-504-91 s	IC CXD8062Q
IC136	8-759-244-85 s	IC TC74AC574F
IC137	8-759-244-85 s	IC TC74AC574F
IC138	8-759-244-85 s	IC TC74AC574F
IC139	8-759-244-85 s	IC TC74AC574F
IC140	8-759-013-95 s	IC MC74HC589F
IC141	8-759-013-95 s	IC MC74HC589F
IC142	8-759-013-95 s	IC MC74HC589F
IC143	8-759-013-95 s	IC MC74HC589F
IC144	8-759-244-75 s	IC TC74AC541F
IC145	8-759-244-37 s	IC TC74AC257F
IC146	8-759-243-50 s	IC TC74AC08F
IC147	8-759-243-50 s	IC TC74AC08F
IC148	8-759-243-50 s	IC TC74AC08F
IC200	8-759-505-02 s	IC CXD8053Q
IC201	8-759-244-75 s	IC TC74AC541F
IC202	8-759-244-75 s	IC TC74AC541F
IC203	8-759-244-75 s	IC TC74AC541F
IC204	8-759-244-75 s	IC TC74AC541F
IC205	8-759-320-87 s	IC HM63021P-28
IC206	8-759-320-87 s	IC HM63021P-28
IC207	8-759-320-87 s	IC HM63021P-28
IC208	8-759-320-87 s	IC HM63021P-28

(KPC-1 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC209	8-759-244-06 s	IC TC74AC164F
IC210	8-759-244-06 s	IC TC74AC164F
IC211	8-759-505-05 s	IC CXD8055Q
IC212	8-759-504-99 s	IC CXD8065Q
IC213	8-759-704-29 s	IC WS57C291B-K2U11-V1.0
IC214	8-759-704-30 s	IC WS57C291B-K2L11-V1.0
IC215	8-759-704-22 s	IC WS57C49B-K2U13-V1.0
IC216	8-759-704-23 s	IC WS57C49B-K2L13-V1.0
IC219	8-759-504-98 s	IC CXD8056Q
IC220	8-759-504-98 s	IC CXD8056Q
IC221	8-759-320-87 s	IC HM63021P-28
IC222	8-759-320-87 s	IC HM63021P-28
IC223	8-759-320-87 s	IC HM63021P-28
IC224	8-759-320-87 s	IC HM63021P-28
IC225	8-759-504-98 s	IC CXD8056Q
IC226	8-759-320-87 s	IC HM63021P-28
IC227	8-759-320-87 s	IC HM63021P-28
IC228	8-759-320-87 s	IC HM63021P-28
IC229	8-759-320-87 s	IC HM63021P-28
IC230	8-759-504-98 s	IC CXD8056Q
IC231	8-759-320-87 s	IC HM63021P-28
IC232	8-759-320-87 s	IC HM63021P-28
IC233	8-759-320-87 s	IC HM63021P-28
IC234	8-759-986-36 s	IC 74ACT257SJ
IC235	8-759-504-91 s	IC CXD8062Q
IC236	8-759-244-85 s	IC TC74AC574F
IC237	8-759-244-85 s	IC TC74AC574F
IC238	8-759-244-85 s	IC TC74AC574F
IC239	8-759-244-85 s	IC TC74AC574F
IC240	8-759-013-95 s	IC MC74HC589F
IC241	8-759-013-95 s	IC MC74HC589F
IC242	8-759-013-95 s	IC MC74HC589F
IC243	8-759-013-95 s	IC MC74HC589F
IC244	8-759-244-75 s	IC TC74AC541F
IC245	8-759-244-37 s	IC TC74AC257F
IC246	8-759-243-50 s	IC TC74AC08F
IC247	8-759-243-50 s	IC TC74AC08F
IC248	8-759-243-50 s	IC TC74AC08F
IC300	8-759-518-05 s	IC CXD8300Q
IC301	8-759-518-05 s	IC CXD8300Q
IC302	8-759-518-05 s	IC CXD8300Q
IC303	8-759-518-05 s	IC CXD8300Q
IC304	8-759-518-05 s	IC CXD8300Q
IC305	8-759-320-87 s	IC HM63021P-28
IC306	8-759-320-87 s	IC HM63021P-28
IC307	8-759-504-99 s	IC CXD8065Q
IC308	8-759-704-29 s	IC WS57C291B-K2U11-V1.0
IC309	8-759-704-30 s	IC WS57C291B-K2L11-V1.0
IC310	8-759-704-29 s	IC WS57C291B-K2U11-V1.0
IC311	8-759-704-30 s	IC WS57C291B-K2L11-V1.0
IC312	8-759-244-85 s	IC TC74AC574F
IC313	8-759-244-85 s	IC TC74AC574F
IC314	8-759-244-85 s	IC TC74AC574F
TH1	1-809-179-11 s	THERMISTOR 102AT-2

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

MIX-4(A)BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-476-A	o MOUNTED CIRCUIT BOARD, MIX-4 (A)
2pcs	3-166-184-01	o LEVER, PC BOARD
2pcs	3-166-185-01	s NUT, PLATE
6pcs	7-621-773-87	s SCREW +B 2.6X10
2pcs	7-622-207-05	s N 2.6, TYPE 2
2pcs	7-626-320-11	s PIN, SPRING 3X8
8pcs	7-682-948-01	s SCREW +PSW 3X8
C1,2	1-163-251-11	s CERAMIC 100pF 5% 50V
C3-153	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C300	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C301	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C302	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C303	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C304	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
CNX1	1-565-207-21	s CONNECTOR, DIN 128P, MALE
CNY1	1-565-207-21	s CONNECTOR, DIN 128P, MALE
CNZ1	1-506-748-11	s CONNECTOR, DIN 96P, MALE
D1	8-719-800-76	s DIODE 1SS226
F1	▲1-576-031-11	s FUSE, MICRO 10A
IC1	8-759-505-27	s IC SN75ALS195J
IC2	8-759-945-30	s IC SN75ALS194N
IC3	8-759-505-00	s IC CXD8052Q
IC4	8-759-720-48	s IC CAT35C104HP
IC5	8-759-234-77	s IC TC4S66F-TE85L
IC7	8-759-244-75	s IC TC74AC541F
IC8	8-759-244-71	s IC TC74AC540F
IC20	8-759-205-37	s IC SN74HC574ANS
IC21	8-759-243-09	s IC TC74AC74F
IC22	8-759-320-87	s IC HM63021P-28
IC30	8-759-244-71	s IC TC74AC540F
IC31	8-759-244-15	s IC TC74AC240F
IC32	8-759-244-71	s IC TC74AC540F
IC33	8-759-244-71	s IC TC74AC540F
IC34	8-759-244-75	s IC TC74AC541F
IC35	8-759-244-15	s IC TC74AC240F
IC36	8-759-244-04	s IC TC74AC163F
IC37	8-759-243-09	s IC TC74AC74F
IC51-55	8-759-505-06	s IC CXD8058Q
IC100	8-759-505-05	s IC CXD8055Q
IC101	8-759-505-05	s IC CXD8055Q
IC102	8-759-505-05	s IC CXD8055Q
IC103	8-759-505-05	s IC CXD8055Q
IC104	8-759-504-91	s IC CXD8062Q
IC105	8-759-504-91	s IC CXD8062Q
IC106	8-759-244-85	s IC TC74AC574F
IC107	8-759-244-85	s IC TC74AC574F
IC108	8-759-244-85	s IC TC74AC574F
IC109	8-759-205-37	s IC SN74HC574ANS
IC110	8-759-205-37	s IC SN74HC574ANS
IC111	8-759-205-37	s IC SN74HC574ANS
IC112	8-759-205-37	s IC SN74HC574ANS
IC113	8-759-205-37	s IC SN74HC574ANS
IC114	8-759-320-87	s IC HM63021P-28
IC115	8-759-320-87	s IC HM63021P-28

(MIX-4(A)BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC116	8-759-320-87	s IC HM63021P-28
IC117	8-759-320-87	s IC HM63021P-28
IC118	8-759-320-87	s IC HM63021P-28
IC119	8-759-320-87	s IC HM63021P-28
IC120	8-759-320-87	s IC HM63021P-28
IC121	8-759-320-87	s IC HM63021P-28
IC122	8-759-320-87	s IC HM63021P-28
IC123	8-759-320-87	s IC HM63021P-28
IC124	8-759-320-87	s IC HM63021P-28
IC125	8-759-320-87	s IC HM63021P-28
IC200	8-759-505-05	s IC CXD8055Q
IC201	8-759-505-05	s IC CXD8055Q
IC202	8-759-505-05	s IC CXD8055Q
IC203	8-759-505-05	s IC CXD8055Q
IC204	8-759-504-91	s IC CXD8062Q
IC205	8-759-504-91	s IC CXD8062Q
IC206	8-759-244-85	s IC TC74AC574F
IC207	8-759-244-85	s IC TC74AC574F
IC208	8-759-244-85	s IC TC74AC574F
IC209	8-759-205-37	s IC SN74HC574ANS
IC210	8-759-205-37	s IC SN74HC574ANS
IC211	8-759-205-37	s IC SN74HC574ANS
IC212	8-759-205-37	s IC SN74HC574ANS
IC213	8-759-205-37	s IC SN74HC574ANS
IC214	8-759-320-87	s IC HM63021P-28
IC215	8-759-320-87	s IC HM63021P-28
IC216	8-759-320-87	s IC HM63021P-28
IC217	8-759-320-87	s IC HM63021P-28
IC218	8-759-320-87	s IC HM63021P-28
IC219	8-759-320-87	s IC HM63021P-28
IC220	8-759-320-87	s IC HM63021P-28
IC221	8-759-320-87	s IC HM63021P-28
IC222	8-759-320-87	s IC HM63021P-28
IC223	8-759-320-87	s IC HM63021P-28
IC224	8-759-320-87	s IC HM63021P-28
IC225	8-759-320-87	s IC HM63021P-28
IC300	8-759-505-05	s IC CXD8055Q
IC302	8-759-505-05	s IC CXD8055Q
IC306	8-759-244-85	s IC TC74AC574F
IC307	8-759-244-85	s IC TC74AC574F
IC308	8-759-244-85	s IC TC74AC574F
IC309	8-759-205-37	s IC SN74HC574ANS
IC310	8-759-205-37	s IC SN74HC574ANS
IC311	8-759-205-37	s IC SN74HC574ANS
IC312	8-759-205-37	s IC SN74HC574ANS
IC313	8-759-205-37	s IC SN74HC574ANS
IC314	8-759-205-37	s IC SN74HC574ANS
IC320	8-759-504-97	s IC CXD8190Q
IC321	8-759-504-97	s IC CXD8190Q
IC322	8-759-320-87	s IC HM63021P-28
IC323	8-759-320-87	s IC HM63021P-28
IC324	8-759-320-87	s IC HM63021P-28
IC325	8-759-320-87	s IC HM63021P-28
IC326	8-759-320-87	s IC HM63021P-28
IC327	8-759-320-87	s IC HM63021P-28
IC328	8-759-320-87	s IC HM63021P-28
IC329	8-759-320-87	s IC HM63021P-28
IC330	8-759-505-03	s IC CXD8066G
IC331	8-759-505-03	s IC CXD8066G

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(MIX-4(A)BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC332	8-759-505-04	s IC CXD8067G
IC333	8-759-505-04	s IC CXD8067G
IC334	8-759-505-03	s IC CXD8066G
IC335	8-759-505-03	s IC CXD8066G
IC336	8-759-505-04	s IC CXD8067G
IC337	8-759-505-04	s IC CXD8067G
IC338	8-759-504-97	s IC CXD8190Q
IC339	8-759-948-31	s IC CXD1319AQ
IC341	8-759-948-31	s IC CXD1319AQ
IC342	8-759-244-85	s IC TC74AC574F
IC343	8-759-244-85	s IC TC74AC574F
IC344	8-759-244-85	s IC TC74AC574F
TH1	1-809-179-11	s THERMISTOR 102AT-2

MIX-6(A)BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-477-A	o MOUNTED CIRCUIT BOARD, MIX-6 (A)
2pcs	3-166-184-01	o LEVER, PC BOARD
2pcs	3-166-185-01	s NUT, PLATE
6pcs	7-621-773-87	s SCREW +B 2.6X10
2pcs	7-622-207-05	s N 2.6, TYPE 2
2pcs	7-626-320-11	s PIN, SPRING 3X8
8pcs	7-682-948-01	s SCREW +PSW 3X8
C1,2	1-163-251-11	s CERAMIC 100pF 5% 50V
C3-143	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C145	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C146	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C147	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C148	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C149	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C150	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C151	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C154	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C155	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C156	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C157	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C158	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C159	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C160	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C161	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C162	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C163	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C164	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C165	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C166	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C167	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C168	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C169	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C170	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C171	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C172	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C173	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C174	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C175	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C176	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C177	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C178	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C179	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C180	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C181	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C300	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C301	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C302	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C303	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C304	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
CN100	1-580-365-11	o CONNECTOR, FPC (DIP TYPE) 13P
CN110	1-580-365-11	o CONNECTOR, FPC (DIP TYPE) 13P
CNI113	1-526-816-21	o SOCKET, IC (DP) 24P
CNI114	1-526-816-21	o SOCKET, IC (DP) 24P
CNI115	1-526-816-21	o SOCKET, IC (DP) 24P
CNI116	1-526-816-21	o SOCKET, IC (DP) 24P
CNI308	1-526-816-21	o SOCKET, IC (DP) 24P
CNI309	1-526-816-21	o SOCKET, IC (DP) 24P

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(MIX-6(A)BOARD)

Ref. No. or Q'ty	Part No.	SP Description
CNX1	1-565-207-21 s	CONNECTOR, DIN 128P, MALE
CNY1	1-565-207-21 s	CONNECTOR, DIN 128P, MALE
CNZ1	1-506-748-11 s	CONNECTOR, DIN 96P, MALE
D1	8-719-800-76 s	DIODE 1SS226
F1	▲1-576-031-11 s	FUSE, MICRO 10A
IC1	8-759-505-27 s	IC SN75ALS195J
IC2	8-759-945-30 s	IC SN75ALS194N
IC3	8-759-505-00 s	IC CXD8052Q
IC4	8-759-720-48 s	IC CAT35C104HP
IC5	8-759-234-77 s	IC TC4S66F-TE85L
IC6	8-759-926-11 s	IC SN74HC138ANS
IC7	8-759-244-75 s	IC TC74AC541F
IC8	8-759-244-71 s	IC TC74AC540F
IC9	8-759-244-75 s	IC TC74AC541F
IC20	8-759-205-37 s	IC SN74HC574ANS
IC21	8-759-243-09 s	IC TC74AC74F
IC22	8-759-320-87 s	IC HM63021P-28
IC30	8-759-244-71 s	IC TC74AC540F
IC31	8-759-244-15 s	IC TC74AC240F
IC32	8-759-244-71 s	IC TC74AC540F
IC33	8-759-244-71 s	IC TC74AC540F
IC34	8-759-244-71 s	IC TC74AC540F
IC35	8-759-244-75 s	IC TC74AC541F
IC36	8-759-244-04 s	IC TC74AC163F
IC37	8-759-243-09 s	IC TC74AC74F
IC38	8-759-244-15 s	IC TC74AC240F
IC39	8-759-244-75 s	IC TC74AC541F
IC51-58	8-759-505-06 s	IC CXD8058Q
IC100	8-759-505-02 s	IC CXD8053Q
IC101	8-759-244-75 s	IC TC74AC541F
IC102	8-759-244-75 s	IC TC74AC541F
IC103	8-759-244-75 s	IC TC74AC541F
IC104	8-759-244-75 s	IC TC74AC541F
IC105	8-759-320-87 s	IC HM63021P-28
IC106	8-759-320-87 s	IC HM63021P-28
IC107	8-759-320-87 s	IC HM63021P-28
IC108	8-759-320-87 s	IC HM63021P-28
IC109	8-759-244-06 s	IC TC74AC164F
IC110	8-759-244-06 s	IC TC74AC164F
IC111	8-759-505-05 s	IC CXD8055Q
IC112	8-759-504-99 s	IC CXD8065Q
IC113	8-759-704-29 s	IC WS57C291B-K2U11-V1.0
IC114	8-759-704-30 s	IC WS57C291B-K2L11-V1.0
IC115	8-759-704-22 s	IC WS57C49B-K2U13-V1.0
IC116	8-759-704-23 s	IC WS57C49B-K2L13-V1.0
IC119	8-759-504-98 s	IC CXD8056Q
IC120	8-759-504-98 s	IC CXD8056Q
IC121	8-759-320-87 s	IC HM63021P-28
IC122	8-759-320-87 s	IC HM63021P-28
IC123	8-759-320-87 s	IC HM63021P-28
IC124	8-759-320-87 s	IC HM63021P-28
IC125	8-759-504-98 s	IC CXD8056Q
IC126	8-759-320-87 s	IC HM63021P-28
IC127	8-759-320-87 s	IC HM63021P-28
IC128	8-759-320-87 s	IC HM63021P-28

(MIX-6(A)BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC129	8-759-320-87 s	IC HM63021P-28
IC130	8-759-504-98 s	IC CXD8056Q
IC131	8-759-320-87 s	IC HM63021P-28
IC132	8-759-320-87 s	IC HM63021P-28
IC133	8-759-320-87 s	IC HM63021P-28
IC134	8-759-986-36 s	IC 74ACT257SJ
IC135	8-759-504-91 s	IC CXD8062Q
IC136	8-759-504-91 s	IC CXD8062Q
IC138	8-759-244-37 s	IC TC74AC257F
IC139	8-759-504-91 s	IC CXD8062Q
IC140	8-759-504-91 s	IC CXD8062Q
IC141	8-759-505-05 s	IC CXD8055Q
IC142	8-759-505-05 s	IC CXD8055Q
IC143	8-759-243-50 s	IC TC74AC08F
IC144	8-759-243-50 s	IC TC74AC08F
IC145	8-759-243-50 s	IC TC74AC08F
IC146	8-759-505-05 s	IC CXD8055Q
IC147	8-759-505-05 s	IC CXD8055Q
IC148	8-759-205-37 s	IC SN74HC574ANS
IC149	8-759-205-37 s	IC SN74HC574ANS
IC150	8-759-205-37 s	IC SN74HC574ANS
IC151	8-759-320-87 s	IC HM63021P-28
IC152	8-759-320-87 s	IC HM63021P-28
IC153	8-759-320-87 s	IC HM63021P-28
IC155	8-759-320-87 s	IC HM63021P-28
IC156	8-759-320-87 s	IC HM63021P-28
IC157	8-759-320-87 s	IC HM63021P-28
IC158	8-759-320-87 s	IC HM63021P-28
IC159	8-759-320-87 s	IC HM63021P-28
IC160	8-759-320-87 s	IC HM63021P-28
IC161	8-759-320-87 s	IC HM63021P-28
IC162	8-759-320-87 s	IC HM63021P-28
IC163	8-759-244-75 s	IC TC74AC541F
IC300	8-759-518-05 s	IC CXD8300Q
IC301	8-759-518-05 s	IC CXD8300Q
IC302	8-759-518-05 s	IC CXD8300Q
IC303	8-759-504-97 s	IC CXD8190Q
IC304	8-759-504-97 s	IC CXD8190Q
IC305	8-759-320-87 s	IC HM63021P-28
IC306	8-759-320-87 s	IC HM63021P-28
IC307	8-759-504-99 s	IC CXD8065Q
IC308	8-759-704-29 s	IC WS57C291B-K2U11-V1.0
IC309	8-759-704-30 s	IC WS57C291B-K2L11-V1.0
IC310	8-759-505-05 s	IC CXD8055Q
IC311	8-759-205-37 s	IC SN74HC574ANS
IC312	8-759-205-37 s	IC SN74HC574ANS
IC313	8-759-205-37 s	IC SN74HC574ANS
IC314	8-759-205-37 s	IC SN74HC574ANS
IC315	8-759-320-87 s	IC HM63021P-28
IC316	8-759-320-87 s	IC HM63021P-28
IC317	8-759-320-87 s	IC HM63021P-28
IC318	8-759-320-87 s	IC HM63021P-28
IC319	8-759-320-87 s	IC HM63021P-28
IC320	8-759-320-87 s	IC HM63021P-28
IC321	8-759-320-87 s	IC HM63021P-28
IC322	8-759-320-87 s	IC HM63021P-28
IC323	8-759-504-97 s	IC CXD8190Q
IC324	8-759-243-62 s	IC TC74AC32F
IC325	8-759-986-36 s	IC 74ACT257SJ

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(MIX-6(A)BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC326	8-759-986-36	s IC 74ACT257SJ
IC327	8-759-986-36	s IC 74ACT257SJ
IC328	8-759-986-36	s IC 74ACT257SJ
IC329	8-759-986-36	s IC 74ACT257SJ
IC330	8-759-986-36	s IC 74ACT257SJ
IC331	8-759-986-36	s IC 74ACT257SJ
IC332	8-759-986-36	s IC 74ACT257SJ
IC333	8-759-986-36	s IC 74ACT257SJ
IC334	8-759-986-36	s IC 74ACT257SJ
IC335	8-759-986-36	s IC 74ACT257SJ
IC336	8-759-986-36	s IC 74ACT257SJ
IC337	8-759-504-91	s IC CXD8062Q
IC338	8-759-504-91	s IC CXD8062Q
IC339	8-759-504-97	s IC CXD8190Q
IC340	8-759-504-97	s IC CXD8190Q
IC341	8-759-504-91	s IC CXD8062Q
IC342	8-759-504-91	s IC CXD8062Q
IC343	8-759-504-91	s IC CXD8062Q
IC344	8-759-504-91	s IC CXD8062Q
IC345	8-759-243-62	s IC TC74AC32F
IC346	8-759-243-62	s IC TC74AC32F
IC347	8-759-243-62	s IC TC74AC32F
IC348	8-759-243-62	s IC TC74AC32F
IC349	8-759-504-91	s IC CXD8062Q
IC350	8-759-504-91	s IC CXD8062Q
IC351	8-759-504-91	s IC CXD8062Q
IC352	8-759-504-91	s IC CXD8062Q
IC353	8-759-504-91	s IC CXD8062Q
IC354	8-759-504-91	s IC CXD8062Q
IC355	8-759-504-91	s IC CXD8062Q
IC356	8-759-504-91	s IC CXD8062Q
IC357	8-759-948-31	s IC CXD1319AQ
IC358	8-759-948-31	s IC CXD1319AQ
IC359	8-759-504-91	s IC CXD8062Q
IC360	8-759-504-91	s IC CXD8062Q
IC361	8-759-504-95	s IC CXD8026Q
IC362	8-759-504-95	s IC CXD8026Q
IC363	8-759-948-31	s IC CXD1319AQ
IC364	8-759-948-31	s IC CXD1319AQ
IC365	8-759-948-31	s IC CXD1319AQ
IC366	8-759-948-31	s IC CXD1319AQ
IC367	8-759-504-91	s IC CXD8062Q
IC368	8-759-504-91	s IC CXD8062Q
IC369	8-759-505-02	s IC CXD8053Q
IC370	8-759-505-02	s IC CXD8053Q
IC371	8-759-504-97	s IC CXD8190Q
IC372	8-759-504-97	s IC CXD8190Q
IC373	8-759-244-85	s IC TC74AC574F
IC374	8-759-244-85	s IC TC74AC574F
IC375	8-759-244-85	s IC TC74AC574F
IC376	8-759-244-85	s IC TC74AC574F
IC377	8-759-244-85	s IC TC74AC574F
TH1	1-809-179-11	s THERMISTOR 102AT-2

MAT-2 BOARD

Ref. No. or Q'ty	Part No.	SP Description
2pcs	3-166-184-01	o LEVER, PC BOARD
2pcs	3-166-185-01	s NUT, PLATE
6pcs	7-621-773-87	s SCREW +B 2.6X10
2pcs	7-622-207-05	s N 2.6, TYPE 2
2pcs	7-626-320-11	s PIN, SPRING 3X8
8pcs	7-682-948-01	s SCREW +PSW 3X8
C1	1-163-251-11	s CERAMIC 100pF 5% 50V
C2-23	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C101	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C102	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C103	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C104	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C105	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C106	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C107	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C108	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C109	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C110	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C111	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C112	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C113	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C114	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C115	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C116	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C117	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C118	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C119	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C120	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C121	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C122	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C123	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C128	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C201	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C202	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C203	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C204	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C205	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C206	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C207	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C208	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C209	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C210	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C211	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C212	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C213	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C216	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C217	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C218	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C220	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C222	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C223	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C224	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C225	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C226	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C227	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C228	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C304	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C305	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(MAT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C306	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C307	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C308	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C309	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C320	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C321	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C322	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C323	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C324	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C325	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C326	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C327	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C328	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C329	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C330	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C331	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
CN101	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN102	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN103	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN201	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN202	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CN203	1-580-365-11 o	CONNECTOR, FPC (DIP TYPE) 13P
CNI6	1-526-652-21 s	SOCKET, IC (DP) 8P
CNI101	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI102	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI114	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI115	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI116	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI117	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI201	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI202	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI216	1-526-816-21 o	SOCKET, IC (DP) 24P
CNI217	1-526-816-21 o	SOCKET, IC (DP) 24P
CNX1	1-565-207-21 s	CONNECTOR, DIN 128P, MALE
CNY1	1-565-207-21 s	CONNECTOR, DIN 128P, MALE
CNZ1	1-506-748-11 s	CONNECTOR, DIN 96P, MALE
D1	8-719-800-76 s	DIODE 1SS226
F1	▲1-576-031-11 s	FUSE, MICRO 10A
IC2	8-759-505-27 s	IC SN75ALS195J
IC3	8-759-945-30 s	IC SN75ALS194N
IC4	8-759-505-00 s	IC CXD8052Q
IC5	8-759-505-00 s	IC CXD8052Q
IC6	8-759-720-48 s	IC CAT35C104HP
IC7	8-759-505-06 s	IC CXD8058Q
IC8	8-759-505-06 s	IC CXD8058Q
IC9	8-759-244-71 s	IC TC74AC540F
IC10	8-759-244-71 s	IC TC74AC540F
IC11	8-759-505-00 s	IC CXD8052Q
IC12	8-759-244-12 s	IC TC74AC175F
IC13	8-759-244-75 s	IC TC74AC541F
IC14	8-759-244-75 s	IC TC74AC541F
IC15	8-759-244-71 s	IC TC74AC540F
IC16	8-759-244-71 s	IC TC74AC540F

(MAT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC17	8-759-205-37 s	IC SN74HC574ANS
IC18	8-759-926-76 s	IC SN74HC540ANS
IC19	8-759-927-46 s	IC SN74HC00ANS
IC20	8-759-234-77 s	IC TC4566F-TE85L
IC21	8-759-925-74 s	IC SN74HC04ANS
IC22	8-759-945-30 s	IC SN75ALS194N
IC23	8-759-239-23 s	IC SN74HC86ANS
IC101	8-759-704-27 s	IC WS57C45-SIN1-V1.0
IC102	8-759-704-28 s	IC WS57C45-SIN2-V1.0
IC103	8-759-504-91 s	IC CXD8062Q
IC104	8-759-505-02 s	IC CXD8053Q
IC105	8-759-505-07 s	IC CXD8059Q
IC106	8-759-505-07 s	IC CXD8059Q
IC107	8-759-504-90 s	IC CXD8063Q
IC108	8-759-504-90 s	IC CXD8063Q
IC109	8-759-504-97 s	IC CXD8190Q
IC110	8-759-504-91 s	IC CXD8062Q
IC111	8-759-505-08 s	IC CXD8060Q
IC112	8-759-504-99 s	IC CXD8065Q
IC113	8-759-504-98 s	IC CXD8056Q
IC114	8-759-704-31 s	IC WS57C49B-EMBS-AV1.0
IC115	8-759-704-32 s	IC WS57C49B-EMBS-BV1.0
IC116	8-759-704-29 s	IC WS57C291B-K2U11-V1.0
IC117	8-759-704-30 s	IC WS57C291B-K2L11-V1.0
IC118	8-759-504-97 s	IC CXD8190Q
IC119	8-759-504-90 s	IC CXD8063Q
IC120	8-759-504-91 s	IC CXD8062Q
IC121	8-759-504-90 s	IC CXD8063Q
IC122	8-759-504-91 s	IC CXD8062Q
IC123	8-759-925-74 s	IC SN74HC04ANS
IC128	8-759-925-76 s	IC SN74HC08ANS
IC201	8-759-704-27 s	IC WS57C45-SIN1-V1.0
IC202	8-759-704-28 s	IC WS57C45-SIN2-V1.0
IC203	8-759-504-91 s	IC CXD8062Q
IC204	8-759-505-02 s	IC CXD8053Q
IC205	8-759-505-07 s	IC CXD8059Q
IC206	8-759-505-07 s	IC CXD8059Q
IC207	8-759-504-90 s	IC CXD8063Q
IC208	8-759-504-90 s	IC CXD8063Q
IC209	8-759-504-97 s	IC CXD8190Q
IC210	8-759-504-91 s	IC CXD8062Q
IC211	8-759-505-08 s	IC CXD8060Q
IC212	8-759-504-99 s	IC CXD8065Q
IC213	8-759-504-98 s	IC CXD8056Q
IC216	8-759-704-29 s	IC WS57C291B-K2U11-V1.0
IC217	8-759-704-30 s	IC WS57C291B-K2L11-V1.0
IC218	8-759-504-97 s	IC CXD8190Q
IC220	8-759-504-91 s	IC CXD8062Q
IC222	8-759-504-91 s	IC CXD8062Q
IC223	8-759-925-74 s	IC SN74HC04ANS
IC224	8-759-205-37 s	IC SN74HC574ANS
IC225	8-759-205-37 s	IC SN74HC574ANS
IC226	8-759-205-37 s	IC SN74HC574ANS
IC227	8-759-205-37 s	IC SN74HC574ANS
IC228	8-759-925-76 s	IC SN74HC08ANS
IC304	8-759-513-68 s	IC CXD8258Q
IC305	8-759-513-68 s	IC CXD8258Q
IC306	8-759-513-68 s	IC CXD8258Q
IC307	8-759-513-68 s	IC CXD8258Q

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(MAT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC308	8-759-513-68	s IC CXD8258Q
IC309	8-759-513-68	s IC CXD8258Q
IC320	8-759-205-37	s IC SN74HC574ANS
IC321	8-759-205-37	s IC SN74HC574ANS
IC322	8-759-205-37	s IC SN74HC574ANS
IC323	8-759-504-97	s IC CXD8190Q
IC324	8-759-504-90	s IC CXD8063Q
IC325	8-759-504-90	s IC CXD8063Q
IC326	8-759-504-97	s IC CXD8190Q
IC327	8-759-205-37	s IC SN74HC574ANS
IC328	8-759-205-37	s IC SN74HC574ANS
IC329	8-759-205-37	s IC SN74HC574ANS
IC330	8-759-205-37	s IC SN74HC574ANS
IC331	8-759-205-37	s IC SN74HC574ANS
TH1	1-809-179-11	s THERMISTOR 102AT-2

OUT-2 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-478-A	o MOUNTED CIRCUIT BOARD, OUT-2
2pcs	3-166-184-01	o LEVER, PC BOARD
2pcs	3-166-185-01	s NUT, PLATE
6pcs	7-621-773-87	s SCREW +B 2.6X10
2pcs	7-622-207-05	s N 2.6, TYPE 2
2pcs	7-626-320-11	s PIN, SPRING 3X8
8pcs	7-682-948-01	s SCREW +PSW 3X8
C1-3	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C6-28	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C121	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C122	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C123	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C124	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C125	1-163-121-00	s CERAMIC, CHIP 150pF 5% 50V
C126	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C127	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C131	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C132	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C133	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C134	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C135	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C136	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C137	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C138	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C139	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C141	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C142	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C143	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C144	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C145	1-163-121-00	s CERAMIC, CHIP 150pF 5% 50V
C146	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C147	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C151	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C152	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C153	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C154	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C155	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C156	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C157	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C158	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C159	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C161	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C162	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C163	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C164	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C165	1-163-121-00	s CERAMIC, CHIP 150pF 5% 50V
C166	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C167	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C171	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C172	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C173	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C174	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C175	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C176	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C177	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C178	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C179	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C181	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(OUT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C345	1-163-121-00	s CERAMIC, CHIP 150pF 5% 50V
C346	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C347	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C351	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C352	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C353	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C354	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C355	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C356	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C357	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C358	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C359	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C361	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C362	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C363	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C364	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C365	1-163-121-00	s CERAMIC, CHIP 150pF 5% 50V
C366	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C367	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C371	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C372	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C373	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C374	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C375	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C376	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C377	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C378	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C379	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C401	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C402	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C403	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C404	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C405	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C406	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C407	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C408	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C409	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C410	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C411	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C412	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C413	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C414	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C415	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C416	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C417	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C418	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C419	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C420	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C421	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C422	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C423	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C424	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C425	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C426	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C427	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C428	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C429	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C430	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C431	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V

(OUT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C432	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C433	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C434	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C435	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C436	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C437	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C438	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C439	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C440	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C441	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C442	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C443	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C444	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C501	1-124-566-11	s ELECT 120uF 20% 6.3V
C502	1-124-566-11	s ELECT 120uF 20% 6.3V
C503	1-124-566-11	s ELECT 120uF 20% 6.3V
C504	1-124-566-11	s ELECT 120uF 20% 6.3V
C505	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C506	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C507	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C508	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C509	1-163-251-11	s CERAMIC 100pF 5% 50V
C510	1-163-251-11	s CERAMIC 100pF 5% 50V
C513	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C514	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C515	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C600	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
CNX1	1-565-207-21	s CONNECTOR, DIN 128P, MALE
CNY1	1-565-207-21	s CONNECTOR, DIN 128P, MALE
CNZ1	1-506-748-11	s CONNECTOR, DIN 96P, MALE
D450	8-719-800-76	s DIODE 1SS226
D451	8-719-800-76	s DIODE 1SS226
F450	▲1-576-031-11	s FUSE, MICRO 10A
F451	▲1-576-031-11	s FUSE, MICRO 10A
IC1	8-759-244-85	s IC TC74AC574F
IC2	8-759-244-85	s IC TC74AC574F
IC3	8-759-244-85	s IC TC74AC574F
IC6-24	8-759-244-85	s IC TC74AC574F
IC25	8-759-504-95	s IC CXD8026Q
IC26	8-759-504-95	s IC CXD8026Q
IC27	8-759-243-06	s IC TC74AC04F
IC28	8-759-244-85	s IC TC74AC574F
IC121	8-759-323-08	s IC HM63021FP-28
IC122	8-759-323-08	s IC HM63021FP-28
IC123	8-759-511-55	s IC CXD8189AQ
IC126	8-741-601-11	s IC SBX1601A
IC128	8-752-202-90	s IC CX22029
IC141	8-759-323-08	s IC HM63021FP-28
IC142	8-759-323-08	s IC HM63021FP-28
IC143	8-759-511-55	s IC CXD8189AQ
IC146	8-741-601-11	s IC SBX1601A
IC148	8-752-202-90	s IC CX22029
IC161	8-759-323-08	s IC HM63021FP-28
IC162	8-759-323-08	s IC HM63021FP-28
IC163	8-759-511-55	s IC CXD8189AQ

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(OUT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC166	8-741-601-11 s	IC SBX1601A
IC168	8-752-202-90 s	IC CX22029
IC181	8-759-323-08 s	IC HM63021FP-28
IC182	8-759-323-08 s	IC HM63021FP-28
IC183	8-759-511-55 s	IC CXD8189AQ
IC186	8-741-601-11 s	IC SBX1601A
IC188	8-752-202-90 s	IC CX22029
IC201	8-759-323-08 s	IC HM63021FP-28
IC202	8-759-323-08 s	IC HM63021FP-28
IC203	8-759-511-55 s	IC CXD8189AQ
IC206	8-741-601-11 s	IC SBX1601A
IC207	8-752-050-69 s	IC CXA1389AQ
IC208	8-752-202-90 s	IC CX22029
IC241	8-759-323-08 s	IC HM63021FP-28
IC242	8-759-323-08 s	IC HM63021FP-28
IC243	8-759-511-55 s	IC CXD8189AQ
IC246	8-741-601-11 s	IC SBX1601A
IC248	8-752-202-90 s	IC CX22029
IC261	8-759-323-08 s	IC HM63021FP-28
IC262	8-759-323-08 s	IC HM63021FP-28
IC263	8-759-511-55 s	IC CXD8189AQ
IC266	8-741-601-11 s	IC SBX1601A
IC267	8-752-202-90 s	IC CX22029
IC281	8-759-323-08 s	IC HM63021FP-28
IC282	8-759-323-08 s	IC HM63021FP-28
IC283	8-759-511-55 s	IC CXD8189AQ
IC286	8-741-601-11 s	IC SBX1601A
IC287	8-752-202-90 s	IC CX22029
IC301	8-759-323-08 s	IC HM63021FP-28
IC302	8-759-323-08 s	IC HM63021FP-28
IC303	8-759-511-55 s	IC CXD8189AQ
IC306	8-741-601-11 s	IC SBX1601A
IC307	8-752-202-90 s	IC CX22029
IC321	8-759-323-08 s	IC HM63021FP-28
IC322	8-759-323-08 s	IC HM63021FP-28
IC323	8-759-511-55 s	IC CXD8189AQ
IC326	8-741-601-11 s	IC SBX1601A
IC327	8-752-202-90 s	IC CX22029
IC341	8-759-323-08 s	IC HM63021FP-28
IC342	8-759-323-08 s	IC HM63021FP-28
IC343	8-759-511-55 s	IC CXD8189AQ
IC346	8-741-601-11 s	IC SBX1601A
IC347	8-752-202-90 s	IC CX22029
IC361	8-759-323-08 s	IC HM63021FP-28
IC362	8-759-323-08 s	IC HM63021FP-28
IC363	8-759-511-55 s	IC CXD8189AQ
IC366	8-741-601-11 s	IC SBX1601A
IC367	8-752-202-90 s	IC CX22029
IC401	8-759-505-00 s	IC CXD8052Q
IC402	8-759-505-27 s	IC SN75ALS195J
IC403	8-759-945-30 s	IC SN75ALS194N
IC404	8-759-720-48 s	IC CAT35C104HP
IC405	8-759-234-77 s	IC TC4566F-TE85L
IC406	8-759-244-71 s	IC TC74AC540F
IC407	8-759-244-71 s	IC TC74AC540F
IC408	8-759-244-71 s	IC TC74AC540F
IC409	8-759-244-71 s	IC TC74AC540F
IC410	8-759-244-75 s	IC TC74AC541F
IC411	8-759-505-06 s	IC CXD8058Q

(OUT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC412	8-759-505-06 s	IC CXD8058Q
IC413	8-759-505-06 s	IC CXD8058Q
IC414	8-759-505-06 s	IC CXD8058Q
IC415	8-759-505-06 s	IC CXD8058Q
IC416	8-759-244-85 s	IC TC74AC574F
IC417	8-759-244-85 s	IC TC74AC574F
IC418	8-759-244-85 s	IC TC74AC574F
IC419	8-759-245-77 s	IC TC74ACT574F
IC420	8-759-245-77 s	IC TC74ACT574F
IC421	8-759-245-77 s	IC TC74ACT574F
IC422	8-759-323-08 s	IC HM63021FP-28
IC423	8-759-323-08 s	IC HM63021FP-28
IC424	8-759-323-08 s	IC HM63021FP-28
IC425	8-759-323-08 s	IC HM63021FP-28
IC426	8-759-013-95 s	IC MC74HC589F
IC427	8-759-013-95 s	IC MC74HC589F
IC428	8-759-032-59 s	IC MC74HC595AF
IC429	8-759-032-59 s	IC MC74HC595AF
IC430	8-759-994-64 s	IC MB88341PF
IC431	8-759-948-40 s	IC DS1000M-50
IC432	8-759-012-13 s	IC MC10H125M
IC433	8-759-012-13 s	IC MC10H125M
IC434	8-759-012-13 s	IC MC10H125M
IC435	8-759-926-50 s	IC SN74HC251NS
IC436	8-759-926-50 s	IC SN74HC251NS
IC437	8-759-012-02 s	IC MC10H124M
L1,2	1-421-370-00 s	COIL, CHOKE
L121	1-410-312-11 s	INDUCTOR 0.22uH
L123	1-412-026-11 s	INDUCTOR CHIP 1uH
L141	1-410-312-11 s	INDUCTOR 0.22uH
L143	1-412-026-11 s	INDUCTOR CHIP 1uH
L161	1-410-312-11 s	INDUCTOR 0.22uH
L163	1-412-026-11 s	INDUCTOR CHIP 1uH
L181	1-410-312-11 s	INDUCTOR 0.22uH
L183	1-412-026-11 s	INDUCTOR CHIP 1uH
L201	1-410-312-11 s	INDUCTOR 0.22uH
L203	1-412-026-11 s	INDUCTOR CHIP 1uH
L241	1-410-312-11 s	INDUCTOR 0.22uH
L243	1-412-026-11 s	INDUCTOR CHIP 1uH
L261	1-410-312-11 s	INDUCTOR 0.22uH
L263	1-412-026-11 s	INDUCTOR CHIP 1uH
L281	1-410-312-11 s	INDUCTOR 0.22uH
L283	1-412-026-11 s	INDUCTOR CHIP 1uH
L301	1-410-312-11 s	INDUCTOR 0.22uH
L303	1-412-026-11 s	INDUCTOR CHIP 1uH
L321	1-410-312-11 s	INDUCTOR 0.22uH
L323	1-412-026-11 s	INDUCTOR CHIP 1uH
L341	1-410-312-11 s	INDUCTOR 0.22uH
L343	1-412-026-11 s	INDUCTOR CHIP 1uH
L361	1-410-312-11 s	INDUCTOR 0.22uH
L363	1-412-026-11 s	INDUCTOR CHIP 1uH
Q121	8-729-216-22 s	TRANSISTOR 2SA1162
Q122	8-729-143-46 s	TRANSISTOR 2SC3356-T1R24
Q123	8-729-143-46 s	TRANSISTOR 2SC3356-T1R24
Q124	8-729-601-58 s	TRANSISTOR 2SC3053TP-1C
Q125	8-729-143-46 s	TRANSISTOR 2SC3356-T1R24
Q141	8-729-216-22 s	TRANSISTOR 2SA1162
Q142	8-729-143-46 s	TRANSISTOR 2SC3356-T1R24

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(OUT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
Q143	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q144	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q145	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q161	8-729-216-22	s TRANSISTOR 2SA1162
Q162	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q163	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q164	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q165	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q181	8-729-216-22	s TRANSISTOR 2SA1162
Q182	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q183	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q184	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q185	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q201	8-729-216-22	s TRANSISTOR 2SA1162
Q204	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q205	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q241	8-729-216-22	s TRANSISTOR 2SA1162
Q242	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q243	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q244	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q245	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q261	8-729-216-22	s TRANSISTOR 2SA1162
Q262	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q263	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q264	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q265	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q281	8-729-216-22	s TRANSISTOR 2SA1162
Q282	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q283	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q284	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q285	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q301	8-729-216-22	s TRANSISTOR 2SA1162
Q302	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q303	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q304	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q305	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q321	8-729-216-22	s TRANSISTOR 2SA1162
Q322	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q323	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q324	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q325	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q341	8-729-216-22	s TRANSISTOR 2SA1162
Q342	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q343	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q344	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q345	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q361	8-729-216-22	s TRANSISTOR 2SA1162
Q362	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q363	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q364	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q365	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q401	8-729-216-22	s TRANSISTOR 2SA1162
R133	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R134	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R139	1-216-630-11	s METAL, CHIP 130 0.5% 1/10W
R153	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R154	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R159	1-216-630-11	s METAL, CHIP 130 0.5% 1/10W

(OUT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
R173	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R174	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R179	1-216-630-11	s METAL, CHIP 130 0.5% 1/10W
R193	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R194	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R199	1-216-630-11	s METAL, CHIP 130 0.5% 1/10W
R253	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R254	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R259	1-216-630-11	s METAL, CHIP 130 0.5% 1/10W
R273	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R274	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R279	1-216-630-11	s METAL, CHIP 130 0.5% 1/10W
R293	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R294	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R299	1-216-630-11	s METAL, CHIP 130 0.5% 1/10W
R313	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R314	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R319	1-216-630-11	s METAL, CHIP 130 0.5% 1/10W
R333	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R334	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R339	1-216-630-11	s METAL, CHIP 130 0.5% 1/10W
R353	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R354	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R359	1-216-630-11	s METAL, CHIP 130 0.5% 1/10W
R373	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R374	1-216-615-11	s METAL, CHIP 33 0.5% 1/10W
R379	1-216-630-11	s METAL, CHIP 130 0.5% 1/10W
TH1	1-809-179-11	s THERMISTOR 102AT-2

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

XPT-2 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-489-A	o MOUNTED CIRCUIT BOARD, XPT-2
2pcs	3-166-184-01	o LEVER, PC BOARD
2pcs	3-166-185-01	s NUT, PLATE
6pcs	7-621-773-87	s SCREW +B 2.6X10
2pcs	7-622-207-05	s N 2.6, TYPE 2
2pcs	7-626-320-11	s PIN, SPRING 3X8
8pcs	7-682-948-01	s SCREW +PSW 3X8
C1	1-124-941-11	s ELECT 390uF 20% 6.3V
C2	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C3	1-124-941-11	s ELECT 390uF 20% 6.3V
C4	1-124-941-11	s ELECT 390uF 20% 6.3V
C5	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C6	1-124-941-11	s ELECT 390uF 20% 6.3V
C10-12	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C20-27	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C31-37	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C41	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C53	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C60	1-163-251-11	s CERAMIC 100pF 5% 50V
C61	1-163-251-11	s CERAMIC 100pF 5% 50V
C102	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C104	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C105	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C106	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C107	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C111	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C112	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C113	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C114	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C115	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C116	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C117	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C118	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C119	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C120	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C121	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C122	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C123	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C124	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C125	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C132	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C144	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C154	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C202	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C204	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C205	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C206	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C207	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C211	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C212	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C213	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C214	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C215	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C216	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C217	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C218	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C219	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C220	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V

(XPT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C221	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C222	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C223	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C224	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C225	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C232	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C244	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C254	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C302	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C304	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C305	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C306	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C307	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C311	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C312	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C313	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C314	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C315	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C316	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C317	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C318	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C319	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C320	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C321	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C322	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C323	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C324	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C325	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C332	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C344	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C354	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C402	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C404	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C405	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C406	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C407	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C411	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C412	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C413	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C414	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C415	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C416	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C417	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C418	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C419	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C420	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C421	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C422	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C423	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C424	1-126-392-11	s ELECT, CHIP 100uF 20% 6.3V
C425	1-126-394-11	s ELECT, CHIP 10uF 20% 16V
C432	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C444	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C454	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C502	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C504	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C505	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C506	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V
C507	1-164-004-11	s CERAMIC, CHIP 0.1uF 10% 25V

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(XPT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
C953	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C954	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C955	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C956	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C957	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C958	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C959	1-164-004-11 s	CERAMIC, CHIP 0.1uF 10% 25V
C960	1-126-392-11 s	ELECT, CHIP 100uF 20% 6.3V
C961	1-126-392-11 s	ELECT, CHIP 100uF 20% 6.3V
C962	1-126-392-11 s	ELECT, CHIP 100uF 20% 6.3V
C963	1-126-392-11 s	ELECT, CHIP 100uF 20% 6.3V
C964	1-126-392-11 s	ELECT, CHIP 100uF 20% 6.3V
C965	1-126-392-11 s	ELECT, CHIP 100uF 20% 6.3V
CN101	1-569-170-11 o	CONNECTOR, COAXIAL (SMALL TYPE)
CN201	1-569-170-11 o	CONNECTOR, COAXIAL (SMALL TYPE)
CN301	1-569-170-11 o	CONNECTOR, COAXIAL (SMALL TYPE)
CN401	1-569-170-11 o	CONNECTOR, COAXIAL (SMALL TYPE)
CN501	1-569-170-11 o	CONNECTOR, COAXIAL (SMALL TYPE)
CN601	1-569-170-11 o	CONNECTOR, COAXIAL (SMALL TYPE)
CN701	1-569-170-11 o	CONNECTOR, COAXIAL (SMALL TYPE)
CN801	1-569-170-11 o	CONNECTOR, COAXIAL (SMALL TYPE)
CNX1	1-565-207-21 s	CONNECTOR, DIN 128P, MALE
CNY1	1-565-207-21 s	CONNECTOR, DIN 128P, MALE
CNZ1	1-506-748-11 s	CONNECTOR, DIN 96P, MALE
D12	8-719-800-76 s	DIODE 1SS226
D13	8-719-800-76 s	DIODE 1SS226
D101	8-719-800-76 s	DIODE 1SS226
D201	8-719-800-76 s	DIODE 1SS226
D301	8-719-800-76 s	DIODE 1SS226
D401	8-719-800-76 s	DIODE 1SS226
D501	8-719-800-76 s	DIODE 1SS226
D601	8-719-800-76 s	DIODE 1SS226
D701	8-719-800-76 s	DIODE 1SS226
D801	8-719-800-76 s	DIODE 1SS226
F1,2	1-576-031-11 s	FUSE, MICRO 10A
FB902	1-535-178-00 s	BEAD, FERRITE
FB903	1-535-178-00 s	BEAD, FERRITE
FB904	1-535-178-00 s	BEAD, FERRITE
FB905	1-535-178-00 s	BEAD, FERRITE
FB906	1-535-178-00 s	BEAD, FERRITE
FB907	1-535-178-00 s	BEAD, FERRITE
IC10	8-759-505-27 s	IC SN75ALS195J
IC11	8-759-945-30 s	IC SN75ALS194N
IC12	8-759-505-00 s	IC CXD8052Q
IC20	8-759-244-71 s	IC TC74AC540F
IC21	8-759-244-71 s	IC TC74AC540F
IC22	8-759-244-75 s	IC TC74AC541F
IC23	8-759-244-85 s	IC TC74AC574F
IC24	8-759-505-06 s	IC CXD8058Q
IC25	8-759-505-06 s	IC CXD8058Q
IC26	8-759-505-06 s	IC CXD8058Q
IC27	8-759-234-77 s	IC TC4S66F-TE85L
IC31	8-759-032-59 s	IC MC74HC595AF
IC32	8-759-720-48 s	IC CAT35C104HP
IC33	8-759-926-50 s	IC SN74HC251NS

(XPT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC35	8-759-994-64 s	IC MB88341PF
IC36	8-759-243-06 s	IC TC74AC04F
IC37	8-759-505-00 s	IC CXD8052Q
IC101	8-741-602-01 s	IC SBX1602A
IC102	8-759-948-53 s	IC MB766P
IC104	8-759-001-25 s	IC MC10125L
IC105	8-759-506-58 s	IC CXD8199Q
IC106	8-759-320-87 s	IC HM63021P-28
IC107	8-759-320-87 s	IC HM63021P-28
IC109	8-759-035-93 s	IC TC7S32F
IC201	8-741-602-01 s	IC SBX1602A
IC202	8-759-948-53 s	IC MB766P
IC204	8-759-001-25 s	IC MC10125L
IC205	8-759-506-58 s	IC CXD8199Q
IC206	8-759-320-87 s	IC HM63021P-28
IC207	8-759-320-87 s	IC HM63021P-28
IC209	8-759-035-93 s	IC TC7S32F
IC301	8-741-602-01 s	IC SBX1602A
IC302	8-759-948-53 s	IC MB766P
IC304	8-759-001-25 s	IC MC10125L
IC305	8-759-506-58 s	IC CXD8199Q
IC306	8-759-320-87 s	IC HM63021P-28
IC307	8-759-320-87 s	IC HM63021P-28
IC309	8-759-035-93 s	IC TC7S32F
IC401	8-741-602-01 s	IC SBX1602A
IC402	8-759-948-53 s	IC MB766P
IC404	8-759-001-25 s	IC MC10125L
IC405	8-759-506-58 s	IC CXD8199Q
IC406	8-759-320-87 s	IC HM63021P-28
IC407	8-759-320-87 s	IC HM63021P-28
IC409	8-759-035-93 s	IC TC7S32F
IC501	8-741-602-01 s	IC SBX1602A
IC502	8-759-948-53 s	IC MB766P
IC504	8-759-001-25 s	IC MC10125L
IC505	8-759-506-58 s	IC CXD8199Q
IC506	8-759-320-87 s	IC HM63021P-28
IC507	8-759-320-87 s	IC HM63021P-28
IC509	8-759-035-93 s	IC TC7S32F
IC601	8-741-602-01 s	IC SBX1602A
IC602	8-759-948-53 s	IC MB766P
IC604	8-759-001-25 s	IC MC10125L
IC605	8-759-506-58 s	IC CXD8199Q
IC606	8-759-320-87 s	IC HM63021P-28
IC607	8-759-320-87 s	IC HM63021P-28
IC609	8-759-035-93 s	IC TC7S32F
IC701	8-741-602-01 s	IC SBX1602A
IC702	8-759-948-53 s	IC MB766P
IC704	8-759-001-25 s	IC MC10125L
IC705	8-759-506-58 s	IC CXD8199Q
IC706	8-759-320-87 s	IC HM63021P-28
IC707	8-759-320-87 s	IC HM63021P-28
IC709	8-759-035-93 s	IC TC7S32F
IC801	8-741-602-01 s	IC SBX1602A
IC802	8-759-948-53 s	IC MB766P
IC804	8-759-001-25 s	IC MC10125L
IC805	8-759-506-58 s	IC CXD8199Q
IC806	8-759-320-87 s	IC HM63021P-28
IC807	8-759-320-87 s	IC HM63021P-28
IC809	8-759-035-93 s	IC TC7S32F

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(XPT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP Description
IC902	8-759-513-68	s IC CXD8258Q
IC903	8-759-513-68	s IC CXD8258Q
IC904	8-759-513-68	s IC CXD8258Q
IC905	8-759-513-68	s IC CXD8258Q
IC906	8-759-513-68	s IC CXD8258Q
IC907	8-759-513-68	s IC CXD8258Q
L1,2	1-421-370-00	s COIL, CHOKE
L101	1-412-026-11	s INDUCTOR CHIP 1uH
L201	1-412-026-11	s INDUCTOR CHIP 1uH
L301	1-412-026-11	s INDUCTOR CHIP 1uH
L401	1-412-026-11	s INDUCTOR CHIP 1uH
L501	1-412-026-11	s INDUCTOR CHIP 1uH
L601	1-412-026-11	s INDUCTOR CHIP 1uH
L701	1-412-026-11	s INDUCTOR CHIP 1uH
L801	1-412-026-11	s INDUCTOR CHIP 1uH
Q11	8-729-216-22	s TRANSISTOR 2SA1162
Q81-88	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q101	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q102	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q103	8-729-216-22	s TRANSISTOR 2SA1162
Q201	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q202	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q203	8-729-216-22	s TRANSISTOR 2SA1162
Q301	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q302	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q303	8-729-216-22	s TRANSISTOR 2SA1162
Q401	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q402	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q403	8-729-216-22	s TRANSISTOR 2SA1162
Q501	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q502	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q503	8-729-216-22	s TRANSISTOR 2SA1162
Q601	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q602	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q603	8-729-216-22	s TRANSISTOR 2SA1162
Q701	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q702	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q703	8-729-216-22	s TRANSISTOR 2SA1162
Q801	8-729-143-46	s TRANSISTOR 2SC3356-T1R24
Q802	8-729-601-58	s TRANSISTOR 2SC3053TP-1C
Q803	8-729-216-22	s TRANSISTOR 2SA1162
R17	1-216-295-00	s METAL, CHIP 0-OHM
TH10	1-809-179-11	s THERMISTOR 102AT-2

CN-310(A)BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-482-A	o MOUNTED CIRCUIT BOARD, CN-310 (A)
6pcs	3-166-187-01	o SPACER
1pc	3-166-304-02	o PANEL (1), CONNECTOR
1pc	3-167-576-01	o BRACKET, HANDLE
24pcs	3-673-910-21	o SCREW, CONNECTOR
4pcs	7-622-207-05	s N 2.6, TYPE 2
4pcs	7-628-254-20	s SCREW +PS 2.6X8
2pcs	7-682-561-04	s SCREW +B 4X8
4pcs	7-682-903-01	s SCREW +PWH 3X5
8pcs	7-682-947-01	s SCREW +PSW 3X6
CN1-6	1-580-356-11	s CONNECTOR, BNC
CNA1	1-563-890-21	s CONNECTOR, D-SUB 9P, FEMALE
CNC1	1-563-890-21	s CONNECTOR, D-SUB 9P, FEMALE
CND1	1-563-890-21	s CONNECTOR, D-SUB 9P, FEMALE
CNE1,2	1-563-890-21	s CONNECTOR, D-SUB 9P, FEMALE
CNF1	1-563-890-21	s CONNECTOR, D-SUB 9P, FEMALE
CNG1	1-563-891-21	s SOCKET, D-SUB CONNECTOR 25P
CNM1	1-563-890-21	s CONNECTOR, D-SUB 9P, FEMALE
CNS1	1-563-890-21	s CONNECTOR, D-SUB 9P, FEMALE
CNT1	1-563-891-21	s SOCKET, D-SUB CONNECTOR 25P
CNT2	1-563-893-21	s SOCKET, D-SUB CONNECTOR 50P
CNU1	1-563-890-21	s CONNECTOR, D-SUB 9P, FEMALE
CNZ1,2	1-563-337-11	s CONNECTOR, DIN 96P, FEMALE

CN-311 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-435-A	o MOUNTED CIRCUIT BOARD, CN-311
1pc	3-166-215-02	o PANEL (2), CONNECTOR
1pc	3-167-576-01	o BRACKET, HANDLE
2pcs	7-622-207-05	s N 2.6, TYPE 2
2pcs	7-628-254-20	s SCREW +PS 2.6X8
2pcs	7-682-561-04	s SCREW +B 4X8
4pcs	7-682-903-01	s SCREW +PWH 3X5
1pc	7-682-947-01	s SCREW +PSW 3X6
CN1-16	1-580-356-11	s CONNECTOR, BNC
CNZ1	1-563-337-11	s CONNECTOR, DIN 96P, FEMALE

CN-312 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6259-437-A	o MOUNTED CIRCUIT BOARD, CN-312 (B)
1pc	3-166-221-02	o PANEL (5), CONNECTOR
1pc	3-167-576-01	o BRACKET, HANDLE
4pcs	7-622-207-05	s N 2.6, TYPE 2
4pcs	7-628-254-20	s SCREW +PS 2.6X8
2pcs	7-682-561-04	s SCREW +B 4X8
4pcs	7-682-903-01	s SCREW +PWH 3X5
1pc	7-682-947-01	s SCREW +PSW 3X6
CN1-16	1-580-356-11	s CONNECTOR, BNC
CNZ1	1-563-337-11	s CONNECTOR, DIN 96P, FEMALE
CNZ2	1-563-337-11	s CONNECTOR, DIN 96P, FEMALE

CN-456 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	A-6263-090-A	o MOUNTED CIRCUIT BOARD, CN-456
1pc	7-682-648-09	s SCREW +PS 3X8
1pc	7-684-023-04	s N 3, TYPE 2
C1	1-124-518-11	s ELECT 470uF 20% 6.3V
C5	1-124-518-11	s ELECT 470uF 20% 6.3V
C7	1-131-347-00	s TANTALUM 1uF 10% 35V
C8	1-124-522-11	s ELECT 270uF 20% 16V
C10	1-124-522-11	s ELECT 270uF 20% 16V
C12	1-124-522-11	s ELECT 270uF 20% 16V
C14	1-124-522-11	s ELECT 270uF 20% 16V
CN1	1-560-366-00	o CONNECTOR POST HEADER,ILG (4P)
CN2-4	1-506-482-21	o PIN, CONNECTOR 3P
CN5	1-560-366-00	o CONNECTOR POST HEADER,ILG (4P)
D1	8-719-500-15	s DIODE S3S4M
F1	▲ 1-576-031-11	s FUSE, MICRO 10A
FB1,2	1-535-178-00	s BEAD, FERRITE
IC1	8-759-505-30	s IC LT1171CT
L1	1-424-450-11	s COIL, CHOKE 2.0mH
L2	1-424-449-11	s COIL, CHOKE 110mH
R1	1-249-417-11	s CARBON 1k 5% 1/4W
R2	1-249-429-11	s CARBON 10k 5% 1/4W
R3	1-249-418-11	s CARBON 1.2k 5% 1/4W
R4-6	1-249-422-11	s CARBON 2.7k 5% 1/4W
R7	1-249-417-11	s CARBON 1k 5% 1/4W
TH1	1-809-179-11	s THERMISTOR 102AT-2

LE-76 BOARD

Ref. No. or Q'ty	Part No.	SP Description
1pc	1-631-489-11	o PRINTED CIRCUIT BOARD, LE-76
CN1	1-580-356-11	s CONNECTOR, BNC

MB-393 BOARD

Ref. No. or Q'ty	Part No.	SP Description
8pcs	1-580-355-11	o HOUSING, CONNECTOR 96P
84pcs	7-622-207-05	s N 2.6, TYPE 2
84pcs	7-628-254-20	s SCREW +PS 2.6X8
CN1	1-560-368-00	o CONNECTOR POST HEADER, ILG (6P)
CNP3-6	1-535-869-11	s INSERT, POWER
CNP8,9	1-535-869-11	s INSERT, POWER
CNX1-18	1-565-206-11	o CONNECTOR, DIN 128P, MALE
CNY1-18	1-565-206-11	o CONNECTOR, DIN 128P, MALE
CNZ1,2	1-580-299-11	o CONNECTOR, DIN 96P
CNZ5-8	1-563-337-11	s CONNECTOR, DIN 96P, FEMALE
CNZ10,12	1-580-299-11	o CONNECTOR, DIN 96P
CNZ13,14	1-563-337-11	s CONNECTOR, DIN 96P, FEMALE
CNZ15-18	1-580-299-11	o CONNECTOR, DIN 96P
R1-16	1-249-409-11	s CARBON 220 5% 1/4W
R17-19	1-249-405-11	s CARBON 100 5% 1/4W

FRAME

Ref. No. or Q'ty	Part No.	SP Description
4pcs	1-249-408-11	s CARBON 180 5% 1/4W
3pcs	▲1-413-414-13	s REGULATOR, SWITCHING (EWS-180)
1pc	▲1-424-136-11	s FILTER, NOISE
1pc	1-506-468-11	o CONNECTOR, 3P, MALE
1pc	▲1-526-813-12	s INLET, AC 3P
3pcs	1-541-329-31	s FAN, DC (WITH ALARM)
1pc	▲1-572-345-11	s SWITCH, ROCKER (AC POWER)
CB1	▲1-576-036-11	s BREAKER, CIRCUIT 6A 250V

(TO CN-456 BOARD)

CN1	1-561-516-00	o HOUSING, ILG, 4P
	1-560-372-00	o TERMINAL, SOLDERLESS, ILG
CN5	1-561-516-00	o HOUSING, ILG, 4P
	1-560-372-00	o TERMINAL, SOLDERLESS, ILG

(TO LE-76 BOARD)

CN1	1-569-196-11	o HOUSING, ILG, 3P
	1-569-194-11	o TERMINAL, SOLDERLESS

(TO MB-393 BOARD)

CN1	1-561-518-00	o HOUSING, ILG (6P)
	1-560-372-00	o TERMINAL, SOLDERLESS, ILG
CNP2	1-535-427-00	o TERMINAL, SOLDERLESS, AWG-14,16
CNP3	1-535-427-00	o TERMINAL, SOLDERLESS, AWG-14,16
CNP4	1-535-427-00	o TERMINAL, SOLDERLESS, AWG-14,16
CNP5	1-535-427-00	o TERMINAL, SOLDERLESS, AWG-14,16
CNP6	1-535-427-00	o TERMINAL, SOLDERLESS, AWG-14,16
CNP7	1-535-427-00	o TERMINAL, SOLDERLESS, AWG-14,16
CNP8	1-535-427-00	o TERMINAL, SOLDERLESS, AWG-14,16
CNP9	1-535-427-00	o TERMINAL, SOLDERLESS, AWG-14,16

(TO CN10 FOR MOTHER BOARD)

	1-580-352-11	o HOUSING, 20P, MALE
	1-580-358-21	o TERMINAL, SOLDERLESS, AWG-22
	1-580-359-21	o TERMINAL, SOLDERLESS, AWG-16

(TO CN10 FOR POWER SUPPLY UNIT)

	1-580-349-11	o HOUSING, 20P, FEMALE
	1-580-358-21	o TERMINAL, SOLDERLESS, AWG-22
	1-580-369-21	o TERMINAL, SOLDERLESS, AWG-16

(TO CN20 FOR MOTHER BOARD)

	1-580-352-11	o HOUSING, 20P, MALE
	1-580-359-21	o TERMINAL, SOLDERLESS, AWG-16
	1-580-360-21	o TERMINAL, SOLDERLESS, AWG-14

(TO CN20 FOR POWER SUPPLY UNIT)

Parts that are not listed in the "reference number order list" are shown in the "General Purpose Electrical Parts List".

(FRAME)

Ref. No.
or Q'ty Part No. SP Description

1-580-349-11 o HOUSING, 20P, FEMALE
1-580-359-21 o TERMINAL, SOLDERLESS, AWG-16
1-580-360-21 o TERMINAL, SOLDERLESS, AWG-14

(TO SWITCHING REGULATOR)

1-535-321-11 o TERMINAL, SOLDERLESS, AWG18-20
1-535-580-11 o TERMINAL, SOLDERLESS
A1-535-427-00 o TERMINAL, SOLDERLESS, AWG-14,16

(TO AC INLET)

A1-535-446-00 o TERMINAL, FASTEN

(TO AC LINE FILTER)

A1-535-446-00 o TERMINAL, FASTEN

(TO CB1)

A1-535-446-00 o TERMINAL, FASTEN

(TO S1)

A1-563-156-11 o TERMINAL, FASTEN

(TO EARTH)

A1-535-316-11 s TERMINAL, GROUND (M4)

PACKING MATERIALS & SUPPLIED ACCESSORIES

Ref. No.
or Q'ty Part No. SP Description

1pc A-6279-727-A s EX-209 ASSY
1pc A-6279-728-A o RAIL (R) ASSY
1pc 3-701-439-21 s WASHER
1pc 7-624-105-04 s STOP RING 2.3, TYPE -E
3pcs 7-682-903-01 s SCREW +PWH 3X5

1pc A-6279-729-A o RAIL (L) ASSY
1pc 3-701-439-21 s WASHER
1pc 7-624-105-04 s STOP RING 2.3, TYPE -E
3pcs 7-682-903-01 s SCREW +PWH 3X5
1pc 1-506-748-11 s CONNECTOR, DIN 96P, MALE

1pc 1-563-341-11 s CONNECTOR, DIN 96P, FEMALE
2pcs 1-565-205-12 o CONNECTOR, 4 LINE DIN 128P
2pcs 1-565-207-21 s CONNECTOR, DIN 128P, MALE
1pc 3-166-184-01 o LEVER, PC BOARD
4pcs 3-167-578-01 s NUT, PLATE

1pc 3-167-579-01 o BRACKET, PC BOARD LEVER
1pc 3-167-586-01 o PLATE, SHIELD
16pcs 7-621-773-87 s SCREW +B 2.6X10
8pcs 7-622-207-05 s N 2.6, TYPE 2
1pc 7-626-320-11 s PIN, SPRING 3X8

2pcs 7-682-903-01 s SCREW +PWH 3X5
10pcs 7-682-948-01 s SCREW +PSW 3X8
4pcs 7-682-949-01 s SCREW +PSW 3X10
1pc A1-506-411-21 s ADAPTOR, AC PLUG 3P-2P
1pc A1-557-377-11 s CORD, POWER

1pc A1-556-760-11 s CORD, POWER 3P
1pc 1-569-221-11 o CONNECTOR, BNC (WITH RESISTOR)
1pc 2-990-242-01 s HOLDER (B), PLUG

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